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# COST OF LIVING AND THE WAR

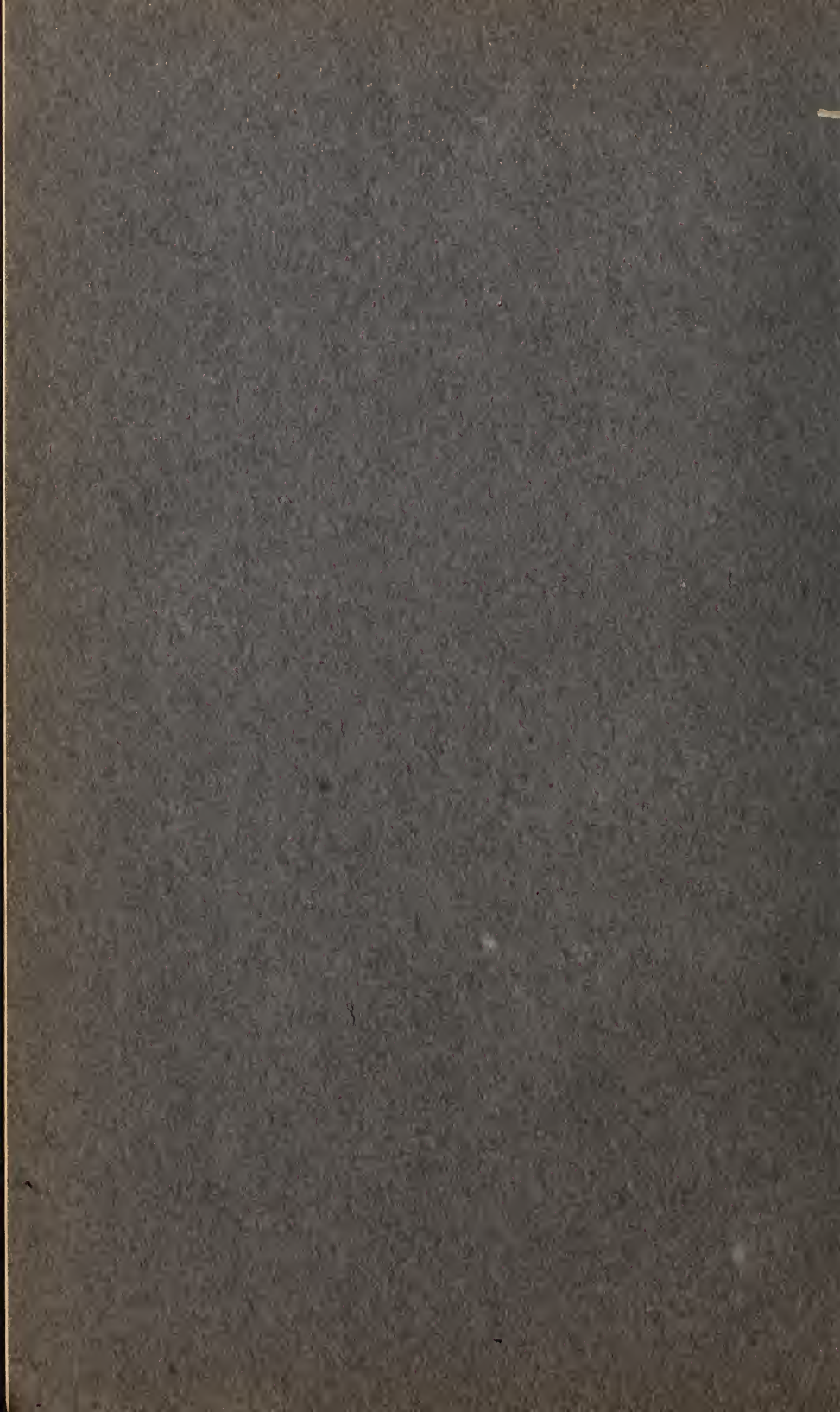
AN ANALYSIS OF RECENT CHANGES

*by*

W. JETT LAUCK



CLEVELAND, OHIO  
THE DOYLE & WALTZ PRINTING COMPANY  
1918



# **PART I.**

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**ANALYSES AND CONCLUSIONS  
FROM AUTHORITATIVE INFORMATION  
WHICH IS AVAILABLE.**





## PREFACE

This volume is a summarization and analysis of official and authoritative data bearing upon the cost of living with special reference to the families of wage-earners. Part II consists primarily of reprints from official publications of retail and wholesale price data and the results of original investigations and studies relative to the budgets of workingmen's families. Part I is a brief analysis and interpretation of the data contained in Part II. This analysis has been made in an impartial way and with no object in mind beyond the presentation in a concise and readable form of the facts as to recent increases in prices and family living costs. The data in Part II is so arranged as to be readily accessible for reference or for use as a basis for further study or interpretation.

The author wishes to make acknowledgment to the United States Bureau of Labor Statistics for its co-operation in giving him access to its records and data. He wishes also to express his grateful appreciation especially to Mr. Leifur Magnusson, of the staff of the Bureau of Labor Statistics, whose assistance in collecting and compiling data has been invaluable. The graphs were drawn by Mr. O. T. Feamster.





# TABLE OF CONTENTS

## Part I.—Analyses and conclusions from authoritative information which is available:

Page.

<b>Chapter I.—Retail prices of foodstuffs.</b>	3
1. High prices and dietary changes.	3
2. Index numbers of retail prices, 1910-1917.	5
3. The increase in the cost of bread.	11
4. The advance in the cost of fuel and light.	11
5. Retail food prices and the purchasing power of the dollar.	13
6. Variations in food prices in the leading cities of the country.	17
<b>Chapter II.—Wholesale prices.</b>	18
1. Wholesale price advances, by commodities, 1911-1917.	19
2. Wholesale prices since the outbreak of the European War.	26
<b>Chapter III.—The value of budgetary studies.</b>	29
1. Weekly budgets, 1911-1917.	29
2. A minimum monthly diet and its cost.	30
3. Tentative budget of Philadelphia Bureau of Municipal Research.	31
4. Revisions and testimony of shipbuilders.	33
5. Annual budgets to cover a minimum of subsistence and comfort.	33
6. Scientific study of increased budgetary costs.	34
7. Changes in standard of living in the District of Columbia as affected by the increased cost of living.	39

## Part II.—Official, documentary and other authoritative data relative to prices, family budgets, and increased living costs:

<b>Chapter I.—Retail prices.</b>	43
1. Scope of study and method of obtaining prices by United States Bureau of Labor Statistics.	43
2. Index numbers of retail prices of all articles of food, 1907-1917.	44
3. Average and relative prices of fifteen articles of food, 1912-1917.	44
4. Change in average prices and in amount of various articles of food that could be bought for one dollar, 1890-1917.	52
5. Increased cost of foodstuffs in the United States since the beginning of the European War.	54
6. Comparative retail prices in leading cities of the United States, 1913-1917.	55
7. Retail prices of dry goods.	61
8. Relation between changes in wholesale and retail prices, 1913-1917.	64
9. Price of bread in selected cities, 1913-1917.	67
10. The advance in price of fuel.	68
11. Price of manufactured and natural gas.	68
12. Relative cost of food in the principal American cities.	70
13. Retail prices in twenty-four cities.	70
14. Report of the Rhode Island Commission.	71

# CONTENTS

## Part II.—(Continued)

Page.

<b>Chapter II.—Wholesale prices</b> .....	75
1. Average and relative wholesale prices of twenty-four commodities	75
2. Index numbers of the United States Bureau of Labor Statistics...	79
3. Index numbers of the Annalist.....	83
4. Index numbers of Bradstreet's.....	85
5. Index numbers of Dun.....	88
6. Index numbers of Gibson.....	93
7. Canadian index numbers of wholesale prices.....	96
8. Wholesale prices in the United States, since 1914—the beginning of the European War.....	101
<b>Chapter III.—Budgetary studies</b> .....	103
1. Proportion of family expenditures for various items.....	103
2. Navy department ration for enlisted men.....	105
3. Canadian budget.....	105
4. Cost of living in the District of Columbia. Investigation by United States Bureau of Labor Statistics, 1916.....	109
5. Budget proposed by Seattle and Tacoma, Washington, street rail- way employees.....	112
6. Budget awarded to Seattle and Tacoma, Washington, street rail- way employees.....	120
7. Higher food prices and the proper nutrition of workingmen's families.....	125
8. Increased living costs, 1916-1917.....	128
9. A minimum budgetary estimate for Pacific Coast workers.....	131
10. Study made on the Pacific Coast by the Labor Adjustment Board of the United States Shipping Board of the United States Emergency Fleet Corporation.....	133
11. Budget of the annual cost of living, 1914-1917, compiled by the State Bureau of Labor, Olympia, Washington.....	135
12. Cost of a minimum food supply for a representative city family..	138
13. Report on the increased cost of living for an unskilled laborer's family in New York City.....	142
14. Digest of literature on cost of living of workingmen in New York City.....	159
15. Minimum standards of family income. (From Conditions of Labor in American Industries, Lauck and Sydenstricker, 1917)..	169
16. Cost of bread among the workers.....	177
<b>Chapter IV.—Bibliography</b> .....	179

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*William* by  
W. JETT LAUCK



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1918



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**FIRST EDITION, JANUARY 1918**

FEB 15 1918

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No. 1.

# CHAPTER I

## RETAIL PRICES OF FOODSTUFFS.

### 1. High Prices and Dietary Changes.

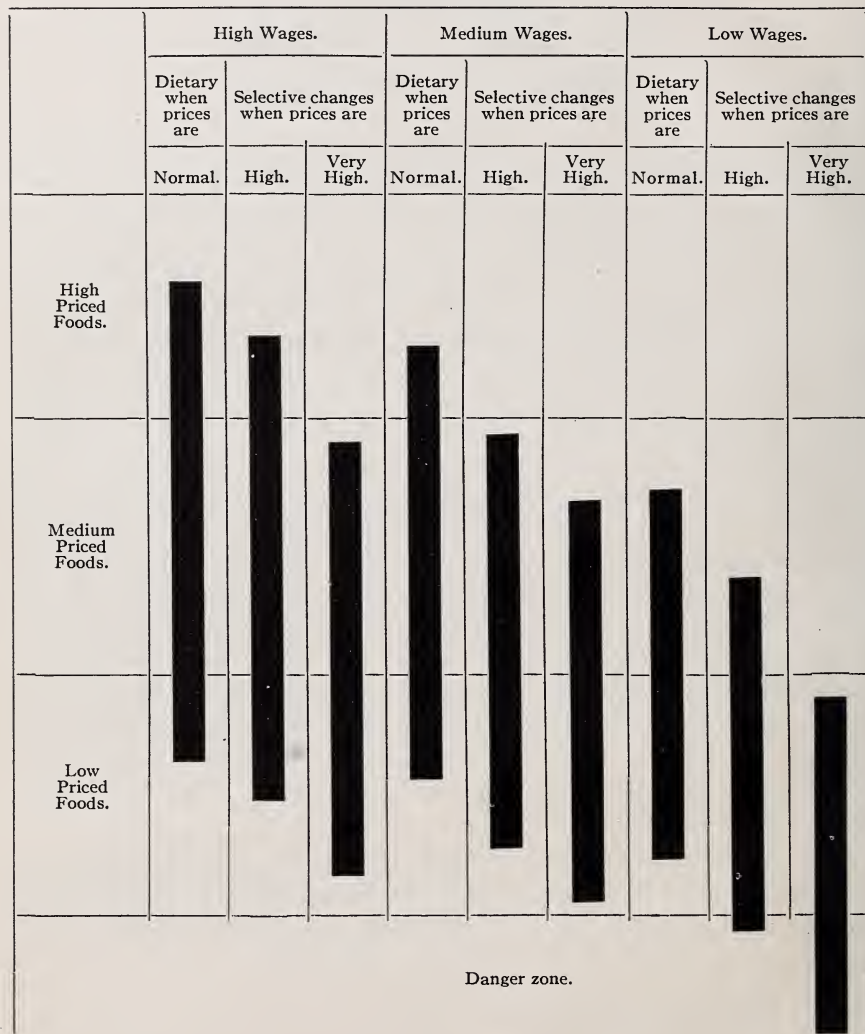
Either in the case of the individual or of the family outlays for food and rent must be made whatever options may be exercised as to other expenditures. If a family has had a large income and has been in the habit of purchasing high-grade articles of food, advances in the cost of foodstuffs would probably be met by purchasing less high-priced and more medium-priced articles. There will be falling off in the nutritive value of the family diet. Families of moderate incomes which had been consuming medium and low-priced foods, under a period of rising prices would purchase less of the medium and more of the low-priced foods, and also still maintain wholesome standards of nutrition. On the other hand, advances in cost of staple food are a positive danger to the families of low incomes. These families under normal conditions are forced to buy cheap foods. When there is a general rise in the price level, they cannot substitute a cheaper food of the same nutritive value. They are compelled to consume cheaper foods, but these articles do not contain the food values to which they have been accustomed. Beans or eggs cannot be substituted for meat. So far as these families are concerned their normal diet constituted an irreducible minimum so far as nourishment was concerned. Higher prices, without a corresponding advance in income, means to them under-nourishment and under-development, with greater liability to disease and all the other dangers which the term implies.

This state of affairs has been most forcibly and interestingly shown in a graphical way by Professor Jaffa, of the University of California. His diagram illustrating this point is reproduced on the following page and is so clear and conclusive as to require no explanation.<sup>1</sup>

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<sup>1</sup> This study is reproduced in full in Part II.

ABILITY OF FAMILIES UNDER HIGH, MEDIUM AND LOW WAGES TO MEET INCREASING FOOD PRICES BY SELECTIVE CHANGES IN THEIR DIETARY.





## 2. Index Numbers of Retail Prices, 1910-1917.<sup>1</sup>

Under these conditions the recent trend in the retail prices of articles of food possesses unusual interest and significance. During the past ten years the United States Bureau of Labor has by the co-operation of private dealers secured records from the leading cities in all sections of the country as to the retail prices of fifteen principal articles of food which enter most prominently into the consumption of an average wage-earner's family. The prices thus obtained have been averaged for specified cities and then for the country as a whole. Upon this latter figure have been based computations as to relative changes in prices throughout the country during the past ten years. In the following table and chart, the average price of the fifteen articles of food for the year 1907 has been taken as a base, or as equalling 100, and compared with variations during subsequent years.

INDEX NUMBERS OF RETAIL PRICES OF FOOD, 1907 TO OCTOBER, 1917.

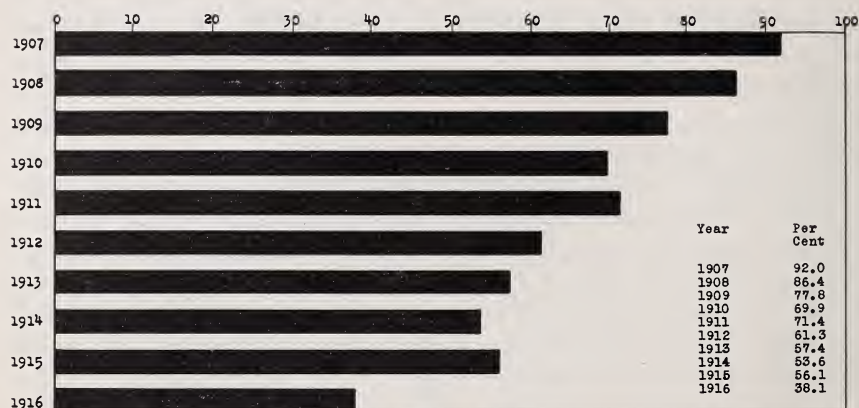
Year.	Retail prices of food.
1907.....	100
1908.....	103
1909.....	108
1910.....	113
1911.....	112
1912.....	119
1913.....	122
1914.....	125
1915.....	123
1916.....	139
January, 1917.....	156
February, 1917.....	162
March, 1917.....	162
April, 1917.....	177
May, 1917.....	184
June, 1917.....	185
July, 1917.....	178
August, 1917.....	181
September, 1917.....	187
October, 1917.....	192

In working out the foregoing relative prices or index numbers, the articles of food have been weighted according to their comparative importance in the food budgets of an average workingman's family, the weights used being those ascertained by an extensive cost of living investigation throughout the country made in 1901 by the Bureau of Labor. This gives an added significance to the results shown. The general upward trend of prices during this entire period is shown graphically by the accompanying line chart.

The advance in the retail prices of all the fifteen selected articles in 1917 as compared with each of the preceding years is set forth in the following diagram:

<sup>1</sup>For detailed tables as to retail price statistics of the Bureau of Labor Statistics, see Part II, Section 2-5.

INCREASE IN RETAIL PRICES OF FOODSTUFFS IN 1917 AS COMPARED  
WITH EACH PRECEDING YEAR DURING THE PERIOD 1907-1916.



It will be at once noted that during the past ten years the rise in prices has been 92 points. During the three years preceding the outbreak of the European war, or the period 1911-1914, the advance was 13 points as contrasted with 67 points during the three years subsequent to the beginning of the war. Expressed in terms of percentages, general retail prices, according to these index numbers, advanced 71.4 per cent during the period 1911-1917, and 53.6 per cent during the period 1914-1917. In 1917 retail prices were 38.1 per cent higher than in 1916 and 56.1 per cent higher than in 1915.

So far as the fifteen separate articles of which the index numbers are composed are concerned, their increase in terms of percentages in 1917 as contrasted with 1914 and 1911 are shown in the following table and diagram:

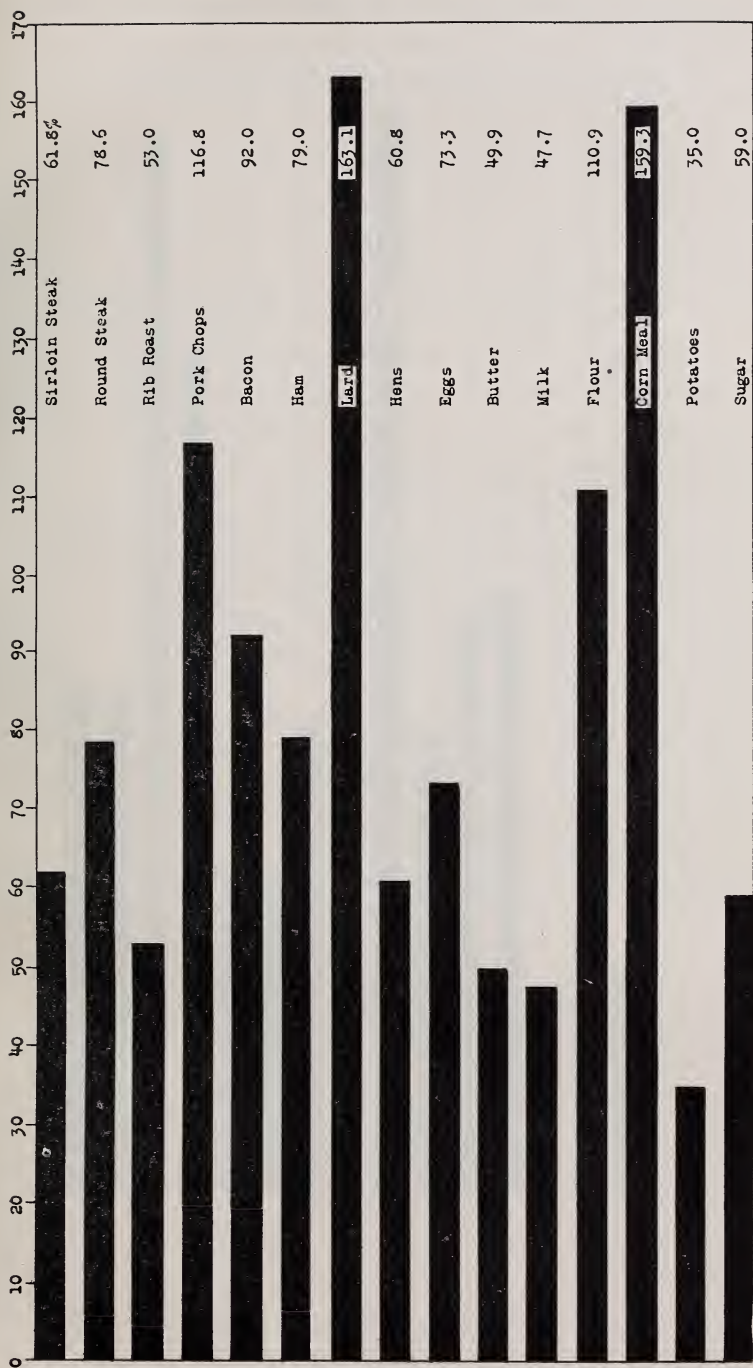
INCREASE IN RETAIL PRICES OF FOODSTUFFS, 1917 OVER 1911 AND 1914.

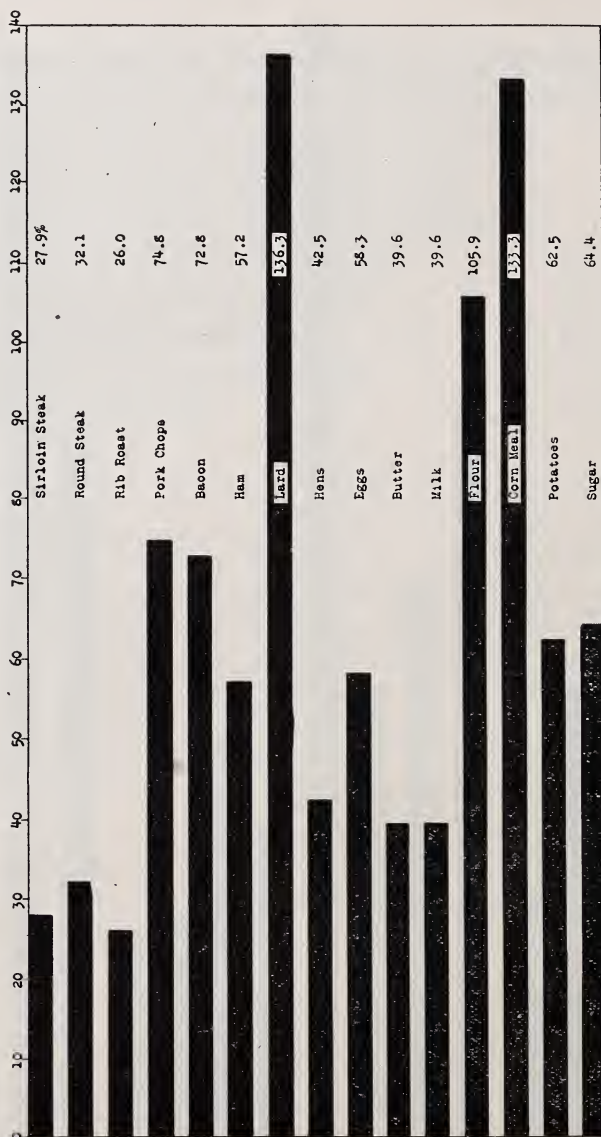
[Compiled from Reports of U. S. Bureau of Labor Statistics.]

Articles.	Per Cent of Increase, 1917 over	
	1911	1914
Sirloin steak.....	61.8	27.9
Round steak.....	78.6	32.1
Rib roast.....	53.0	26.0
Pork chops.....	116.8	74.8
Bacon.....	92.0	72.8
Ham.....	79.0	57.2
Lard.....	163.1	136.3
Hens.....	60.8	42.5
Eggs.....	73.3	58.3
Butter.....	49.9	39.6
Milk.....	47.7	39.6
Flour.....	110.9	105.9
Corn meal.....	159.3	133.3
Potatoes.....	35.0	62.5
Sugar.....	59.0	64.4
Total.....	71.4	53.6



INCREASE IN RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, 1917 OVER 1911.



INCREASE IN RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, 1917  
OVER 1914.

The largest percentages of increase in prices since 1911 are shown for round steak, ham, bacon, flour, pork chops, corn meal, and lard, in the order named. They range from 78.6 per cent in the case of round steak to 163.1 per cent in the case of lard. The articles enumerated, together with potatoes and sugar, also advanced more during the past three years than the other foodstuffs for which information was secured by the Bureau of Labor Statistics. The rapid advance in retail prices of foodstuffs since the outbreak of the European war has been set forth in a special study by the Bureau of Labor Statistics which was published in its Monthly Review of August, 1917.<sup>1</sup> In analyzing the results of this study the following pertinent comment was made:

"Comparing prices on July 15, 1914, just prior to the present war, with prices on July 15, 1917, food as a whole advanced 42 per cent. In July, 1917, flour was 125 per cent higher—that is, two and one-fourth times the price in July, 1914; corn meal was 89 per cent higher; lard was 78 per cent higher; sugar, 75 per cent higher; and potatoes and bread each 50 per cent higher."

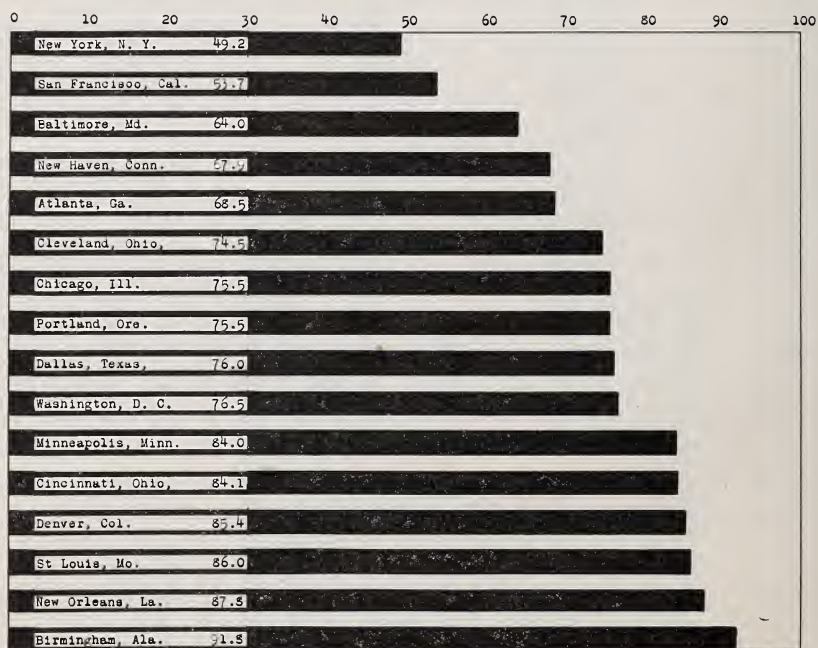
By November, 1917, the prices of these foodstuffs had advanced as a whole until they were, as already pointed out, more than 50 per cent higher than at the beginning of the war in Europe in 1914. The really pronounced rise in retail prices of foodstuffs did not begin, however, until the latter part of 1916. There was a small advance as a rule during the latter half of 1914. In the case of some commodities this was maintained or slightly increased in 1915 and the first half of 1916, while in the case of others there was a small decline. By August and September, 1916, the upward tendency set in very rapidly and has continued up to the present time. These variations during the past three years are clearly shown by the following comparison of prices on January 1 and July 1, 1914-1917, and for the subsequent months of 1917.

RELATIVE RETAIL PRICES, 1914-1917.

Commodities.	1914		1915		1916		1917		
	Jan.	July	Jan.	July	Jan.	July	Jan.	July	Nov.
Hens.....	90	93	86	88	92	102	108	119	125
Eggs.....	116	80	118	74	113	85	145	112	155
Butter.....	101	87	98	87	97	90	115	117	134
Milk.....	100	98	99	96	98	97	109	122	141
Bread.....	85	85	92	97	95	95	108	135	135
Flour.....	73	73	92	93	89	86	127	164	155
Corn meal.....	92	92	97	96	95	96	118	174	209
Rice.....	.....	.....	100	100	100	100	100	116	125
Potatoes.....	70	100	55	55	88	87	145	159	119
Sugar.....	65	65	75	87	84	109	100	114	119
Onions.....	.....	.....	69	72	83	109	141	104	118
Beans.....	.....	.....	66	69	83	106	132	177	172
Prunes.....	.....	.....	102	101	99	100	104	119	124
Raisins.....	.....	.....	97	97	98	99	109	115	115
Coffee.....	.....	.....	100	100	100	100	100	102	101
Tea.....	.....	.....	100	100	100	100	100	110	113

<sup>1</sup> See Part II, Chapter I, Section 5.

INCREASE IN WHOLESALE PRICES OF A LOAF OF BREAD, 1917 OVER  
1914, BY PRINCIPAL CITIES.



### 3. The Increase in the Cost of Bread.

Probably one of the best single indicators of the increased cost of living, especially in the case of families of low incomes, is the price of bread. Some illuminating statistics in this connection have recently been collected by the Federal Bureau of Labor Statistics. They consist of comparative prices in 16 leading American cities during the past three years of a standard loaf of bread weighing sixteen ounces before baking. The following table and chart which are based on these figures show by cities the advance in cost in terms of cents and percentages of this standard loaf in 1917 as compared with 1914:

INCREASE IN THE PRICE OF A LOAF OF BREAD WEIGHING SIXTEEN OUNCES OR OVER BEFORE BAKING, 1917 OVER 1914 BY PRINCIPAL CITIES.

[Compiled from Reports of United States Bureau of Labor Statistics.]

City.	Cost of loaf of Bread.		Increase in 1917 over 1914.	
	1914.	1917.	Cents.	Per cent.
Atlanta, Ga.....	\$0.054	\$0.091	.037	68.5
Baltimore, Md.....	.050	.082	.032	64.0
Birmingham, Ala.....	.049	.094	.045	91.8
Chicago, Ill.....	.053	.093	.040	75.5
Cincinnati, Ohio.....	.044	.081	.037	84.1
Cleveland, Ohio.....	.051	.089	.038	74.5
Dallas, Tex.....	.050	.088	.038	76.0
Denver, Colo.....	.048	.089	.041	85.4
Minneapolis, Minn.....	.050	.092	.042	84.0
New Haven, Conn.....	.053	.089	.036	67.9
New Orleans, La.....	.041	.077	.036	87.8
New York, N. Y.....	.059	.088	.029	49.2
Portland, Ore.....	.049	.086	.037	75.5
St. Louis, Mo.....	.050	.093	.043	86.0
San Francisco, Cal.....	.054	.083	.029	53.7
Washington, D. C.....	.051	.090	.039	76.5

The foregoing statement shows that the range of advance in bread prices since the beginning of the European war has been from 2.9 cents to 4.5 cents a loaf. Expressed in terms of percentage, the smallest increase in 1917 as compared with 1914 was 49.2 per cent in New York; and the highest, 91.8 per cent, in Birmingham, Alabama. In eleven out of the sixteen cities for which returns are given in the table above, the price of a loaf of bread advanced 75 or more per cent during the period, 1914-1917.

### 4. The Advance in the Cost of Fuel and Light.

Comparative prices are available as to the cost of gas for lighting and other purposes in the principal cities of the country. These figures show considerable variations from one locality to another, but practically no increase during recent years. Owing to the recent rapid advances in the cost of fuel, labor, and materials, however, applications from public utility corporations for permission to increase their rates are now pending in all sections of the country and it may be expected that increases in these items of expenditure will take place in the near future.<sup>1</sup>

<sup>1</sup> See Part II, Chapter I.



Increases in the cost of coal have been very rapid during recent years and especially since the beginning of the calendar year, 1917.<sup>2</sup> Up until a year ago, or January, 1917, the advances in the retail prices of coal as compared with the corresponding months of 1914 and 1911, ranged from 22 to 34 per cent. By certain kinds of domestic coal they were as follows:

Kind of coal.	Per cent increase in relative prices in January, 1917, over	
	January, 1914.	January, 1911.
Pennsylvania white ash:		
Stove.....	22	28
Chestnut.....	21	28
Bituminous.....	30	34

The relative retail prices upon which the above comparisons are based and which cover the period January, 1907, to January, 1917, are as follows:

RELATIVE RETAIL PRICES OF COAL EACH YEAR, 1907-1917, INCLUSIVE, AND ON JANUARY 15, AND JULY 15, OF EACH YEAR OF THE SAME PERIOD.

[Average price for 1915 = 100.]

Month and year.	Pennsylvania white ash, stove.	Pennsylvania white ash, Chestnut.	Bituminous.
January, 1907.....	94	92	102
January, 1908.....	95	94	103
January, 1909.....	95	94	99
January, 1910.....	95	94	100
January, 1911.....	95	94	103
January, 1912.....	96	96	100
January, 1913.....	104	103	105
January, 1914.....	100	100	106
January, 1915.....	101	101	102
January, 1916.....	103	103	101
January, 1917.....	122	121	138

There is no authoritative data as to relative prices of coal for the country as a whole subsequent to January, 1917. The following figures, however, which show the price of bituminous coal (run of mine) at the mine in the Pittsburgh District for the period January, 1905, to January, 1918, afford an insight into the trend of retail coal prices.

PRICE OF BITUMINOUS COAL (RUN OF MINE) AT THE MINE PITTSBURGH DISTRICT  
JANUARY, 1905, TO JANUARY, 1918.

1905.....	\$0.95	1912.....	\$1.05
1906.....	1.20	1913.....	1.35
1907.....	1.15	1914.....	1.22
1908.....	1.15	1915.....	1.10
1909.....	1.15	1916.....	1.70
1910.....	1.20	1917.....	4.85
1911.....	1.225	1918.....	2.45

<sup>2</sup> See Part II, Chapter I.

From the above prices it is at once evident that the price of bituminous (run of mine) coal at the pit mouth in the Pittsburgh District was about 300 per cent greater in 1917 than in 1914 and 1911. On July 5, 1917, the Federal Government, through the Coal Committee of the Council of National Defense, fixed a price of \$3.00 a ton, and this was later changed, on November 1, by the National Fuel Administrator to \$2.45 a ton. This latter price was practically 200 per cent higher than in 1914 or 1911.

### 5. Retail Food Prices and the Purchasing Power of the Dollar.

Perhaps a better insight into the significance of recent advances in the retail prices of foodstuffs is to be found in a comparison of the purchasing power of the dollar, or the standard of American values, during recent years. The table and diagram which immediately follow show the declining purchasing power of the dollar over leading articles of foodstuffs during the period, 1911-1917:

DECLINE IN PURCHASING POWER OF THE DOLLAR, 1911-1917.

Article.	Relative purchasing power of the dollar.						
	1911.	1912.	1913.	1914.	1915.	1916.	1917.
Sirloin steak.....lb.	100.0	87.8	81.6	79.6	79.6	75.5	67.3
Round steak.....lb.	100.0	87.9	77.6	74.1	75.9	70.7	55.2
Rib roast.....lb.	100.0	78.1	79.7	76.6	78.1	73.4	60.9
Pork chops.....lb.	100.0	92.9	83.9	80.4	87.5	78.6	46.4
Bacon.....lb.	100.0	100.0	92.5	90.0	92.5	87.5	52.5
Ham.....lb.	100.0	100.0	90.5	88.1	92.9	81.0	54.8
Lard.....lb.	100.0	95.8	88.7	90.1	95.8	80.3	38.0
Hens.....lb.	100.0	96.2	90.4	88.5	92.3	80.8	61.5
Eggs.....doz.	100.0	96.8	96.8	93.5	96.8	87.1	58.1
Butter.....lb.	100.0	89.7	89.7	93.1	96.6	86.2	69.0
Milk.....qt.	100.0	98.3	94.8	94.8	95.7	94.8	68.1
Flour..... $\frac{1}{2}$ bbl.	100.0	96.7	101.6	97.6	81.3	75.6	47.2
Corn meal.....lb.	100.0	104.1	93.2	90.0	87.3	79.5	38.6
Potatoes.....pk.	100.0	96.7	130.0	120.0	146.7	83.3	73.3
Sugar.....lb.	100.0	97.0	111.0	103.0	92.7	76.2	62.8
Total.....	100.0	94.1	91.8	89.6	91.1	80.6	58.3

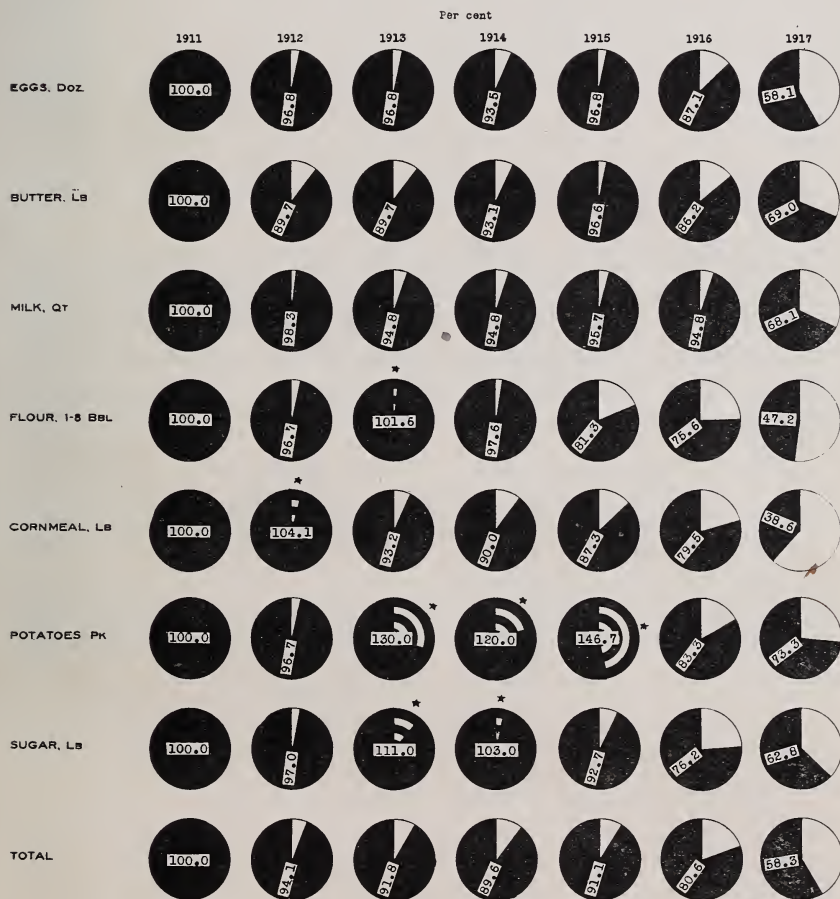
The purchasing power of the dollar in 1917 as compared with 1911, as can be seen from the foregoing figures, declined almost 42 per cent. In other words, practically only three-fifths of the quantities of foodstuffs could be purchased in the latter year as compared with the former. The decline in the buying power of the dollar has been especially marked since the outbreak of the European conflict in 1914. From 1911 to 1914 the purchasing power of the dollar over foods fell only 8 points, while from 1914 to 1917 the decline was 31 points, or almost four times as much as in the three years preceding the war. This tendency is more clearly brought out in the following table, which shows the falling off in the purchasing power of the dollar as compared with each preceding year during the period, 1911-1917.

DECLINE IN THE PURCHASING POWER OF A DOLLAR, BY YEARS AND PRINCIPAL ARTICLES OF FOOD, 1911-1917.





## DECLINE IN THE PURCHASING POWER OF A DOLLAR, BY YEARS AND PRINCIPAL ARTICLES OF FOOD, 1911-1917.



\* Represents INCREASE over 1911.

## DECLINE IN PURCHASING POWER OF THE DOLLAR.

RELATIVE PURCHASING POWER OF THE DOLLAR IN OCTOBER, 1917, AS  
COMPARED WITH

Article.	1911.	1912.	1913.	1914.	1915.	1916.
Sirloin steak.....	67.3	76.7	82.5	84.6	84.6	89.2
Round steak.....	55.2	62.7	71.1	74.4	72.7	78.0
Rib roast.....	60.9	78.0	76.5	79.6	78.0	83.0
Pork chops.....	46.4	50.0	55.3	57.8	53.1	59.1
Bacon.....	52.5	52.5	56.8	58.3	56.8	60.0
Ham.....	54.8	54.8	60.5	62.2	59.0	67.6
Lard.....	38.0	39.7	42.9	42.2	39.7	47.4
Hens.....	61.5	64.0	68.1	69.6	66.7	76.2
Eggs.....	58.1	60.0	60.0	62.1	60.0	66.7
Butter.....	69.0	76.9	76.9	74.1	71.4	80.0
Milk.....	68.1	69.3	71.8	71.8	71.2	71.8
Flour.....	47.2	48.7	46.4	48.3	58.0	62.4
Corn meal.....	38.6	37.1	41.4	42.9	44.3	48.6
Potatoes.....	73.3	75.9	56.4	61.1	50.0	88.0
Sugar.....	62.8	64.8	56.6	60.9	67.8	82.4
Total.....	58.3	62.0	63.5	65.1	64.1	72.4

From this table the fact stands forth that less than one-half as much flour, corn meal and lard could be bought with a dollar in 1917 as contrasted with 1914 and 1911, and less than three-fifths as much pork chops and bacon. Expressed in terms of all the enumerated articles of food the dollar had the following relative values in 1917 as compared with the years listed:

1911.....	58.3 cents
1912.....	62.0 cents
1913.....	63.5 cents
1914.....	65.1 cents
1915.....	64.1 cents
1916.....	72.4 cents

This comparison reveals the astonishing fact that the purchasing power of the dollar, during the past year alone, has declined more than one-fourth.

## 6. Variations in Food Prices in the Leading Cities of the Country.<sup>1</sup>

The retail price of foodstuffs, as reported by the Bureau of Labor Statistics, seems to vary under normal conditions about 24 per cent in the principal cities of the country. The best comparison along these lines has been carefully worked out by Professor J. C. Ogburn of the University of Washington. While a member of the faculty of Reed College at Portland, Oregon, he worked out from the detailed reports of the Bureau of Labor Statistics the relative prices of food stuffs in the leading cities of the country. Portland, Oregon, was taken as 100 and the relation of prices in other cities to Portland and to each other compared on the basis of these returns. Because of their interest and value his final results are reproduced below:

### RELATIVE COST OF FOOD IN LEADING CITIES.

(Portland, Oregon = 100)

Minneapolis.....	92.7		Manchester.....	105.7
St. Paul.....	94.8		Schenectady.....	106.
Denver.....	96.2		Scranton.....	106.3
Milwaukee.....	97.6			
Cincinnati.....	97.8		Washington.....	106.4
			Little Rock.....	106.6
Detroit.....	98.1		Pittsburg.....	106.6
St. Louis.....	98.2		San Francisco.....	106.6
Buffalo.....	98.8		New York.....	106.7
Portland.....	100.			
Baltimore.....	100.2		Philadelphia.....	107.5
			Dallas.....	107.6
Chicago.....	101.3		Boston.....	108.4
Salt Lake City.....	101.9		Charleston.....	108.6
Omaha.....	102.3		Louisville.....	109.
Kansas City.....	102.4			
Richmond.....	102.5		Los Angeles.....	110.3
			Fall River.....	110.3
Memphis.....	102.7		New Haven.....	110.8
Seattle.....	102.8		Providence.....	112.5
Springfield.....	103.5		Jacksonville.....	113.
Indianapolis.....	103.5			
Cleveland.....	104.4		Newark.....	114.1
			Birmingham.....	115.1
Atlanta.....	104.4			
New Orleans.....	104.6			

<sup>1</sup> See Part II, Chapter I, Sections 12 and 13.

## CHAPTER II.

### WHOLESALE PRICES.

Wholesale prices, especially of foodstuffs, show an even greater advance than retail prices during recent years. For the purpose of showing the tendencies as to wholesale prices in a brief, comparative form, the following table has been prepared. It sets forth the increase in the authoritative index numbers of wholesale prices in this country and Canada in the year 1917 as compared with the years 1914 and 1911.

INCREASE IN WHOLESALE PRICES AS INDICATED BY REPRESENTATIVE INDEX NUMBERS, 1917 OVER 1911 AND 1914.

Index number.	Increase per cent.	
	1917 over 1911.	1917 over 1914.
Dun.....	79.1	77.3
Bradstreet.....	104.4	100.1
Annalist.....	98.6	78.1
United States Bureau of Labor Statistics.....	93.5	86.3
Gibson.....	93.1	80.8
Canadian Department of Labor.....	90.4	78.3

The commodities which are used in computing these index numbers together with the basis of computation are technically explained in detail at a later point.<sup>1</sup> Dun and Bradstreet's have been established as one branch of the activities of commercial agencies in reporting the general level of prices in the country. For this reason they represent the prices of a large variety of commodities in order to correctly reflect commercial and industrial tendencies. The same is true but to a less extent of Gibson's index numbers, which are used in connection with a service which aims to analyze and reflect contemporaneous business and financial conditions. The index numbers of the New York Times Annalist, on the other hand, are based on prices of food products alone arranged according to the consumption of an average family. While the index numbers of the Canadian and United States Bureaus of Labor Statistics include other groups of articles than foods, they are also selected and arranged to correspond to the commodities demanded and consumed by a normal or average family. This can readily be seen from the following classification of articles upon which the index numbers of the United States Bureau of Labor Statistics are based:

- Farm products
- Food, etc.
- Cloths and clothing
- Fuel and lighting
- Metals and metal products
- Lumber and building materials
- Drugs and chemicals
- House furnishing goods
- Sundries

Upon referring to the table immediately preceding, together with the following charts, it will be seen that the tendencies in price increases shown by all five of the series of index numbers are remarkably uniform.

<sup>1</sup> See Part II, Chapter II.

With the exception of Bradstreet's they all show the same general advances both for the three years preceding and the three years subsequent to the year 1914. The higher points reached by Bradstreet's were undoubtedly due to the effect of the prices of metals and other primary articles included in the computation of Bradstreet's index numbers. For the period, 1911-1917, the general increase in the wholesale price level, as indicated by these index numbers, ranged from 79.1 to 104.4 per cent. The minimum and maximum, however, were represented by the index numbers of Dun and Bradstreet, which, as already pointed out, were affected by the inclusion of prices for metals and similar commodities which have fluctuated violently during the past three years. The general advance in wholesale prices during the seven years, 1911-1917, as shown by the other four index numbers, ranged from 90.4 per cent in the case of the Canadian series to 98.6 per cent in the case of the Annalist. The increase shown by the Gibson and Bureau of Labor Statistics series was almost the same, being 93.1 per cent in the former, and 93.5 per cent in the latter series.

During the past three years the same relative tendencies have been exhibited. With the exception of Dun and Bradstreet's, the other five series have shown almost similar increases, the difference between the highest and the lowest advance being only 8 points. The Canadian Department of Labor, Gibson, and the Annalist series are almost identical in point of increase, the variation between them being only 2.7 per cent. These results point to the conclusion that the general advance in wholesale prices since the outbreak of the European war has been approximately 78 to 80 per cent.

### 1.—WHOLESALE PRICE ADVANCES, BY COMMODITIES, 1911-1917.

The advances in wholesale prices made by various classes of commodities entering into the computation of the index numbers of the Bureau of Labor Statistics in 1917 as against 1911 and 1914, is shown in the following table:

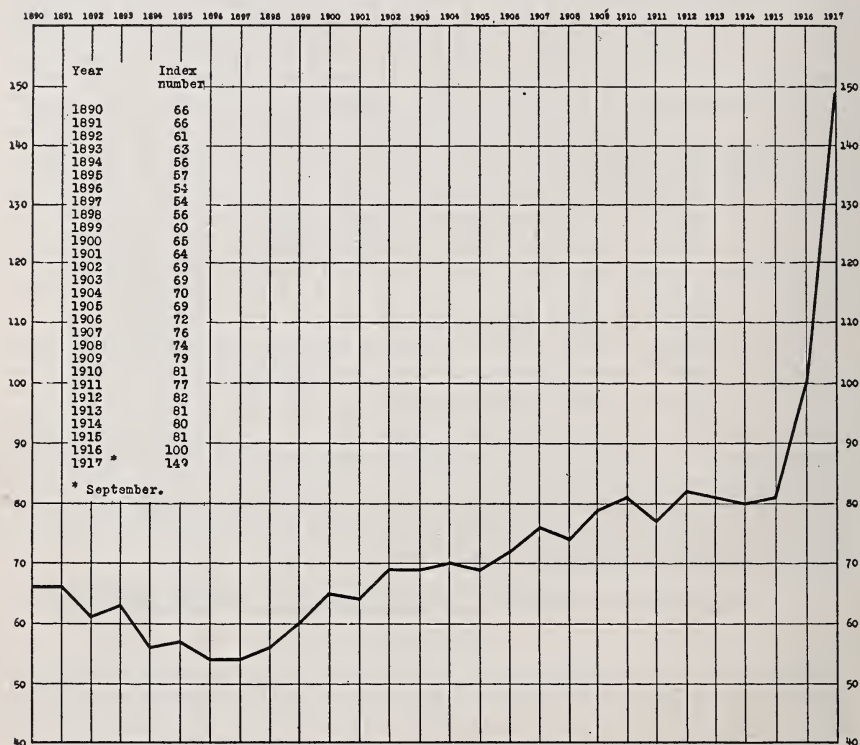
INCREASE IN WHOLESALE PRICES BY CLASSES OF COMMODITIES, ENTERING  
INTO INDEX NUMBERS OF BUREAU OF LABOR STATISTICS,  
1917 OVER 1911 AND 1914.

	Per cent of increase.	
	1917 over 1911.	1917 over 1914.
Farm products.....	118	95
Food, etc.....	81	74
Cloths and clothing.....	96	91
Fuel and lighting.....	113	86
Metals and metal products.....	157	161
Lumber and building materials.....	33	39
Drugs and chemicals.....	98	98
House furnishing goods.....	67	60
Miscellaneous.....	55	64
All commodities.....	93.5	86.3

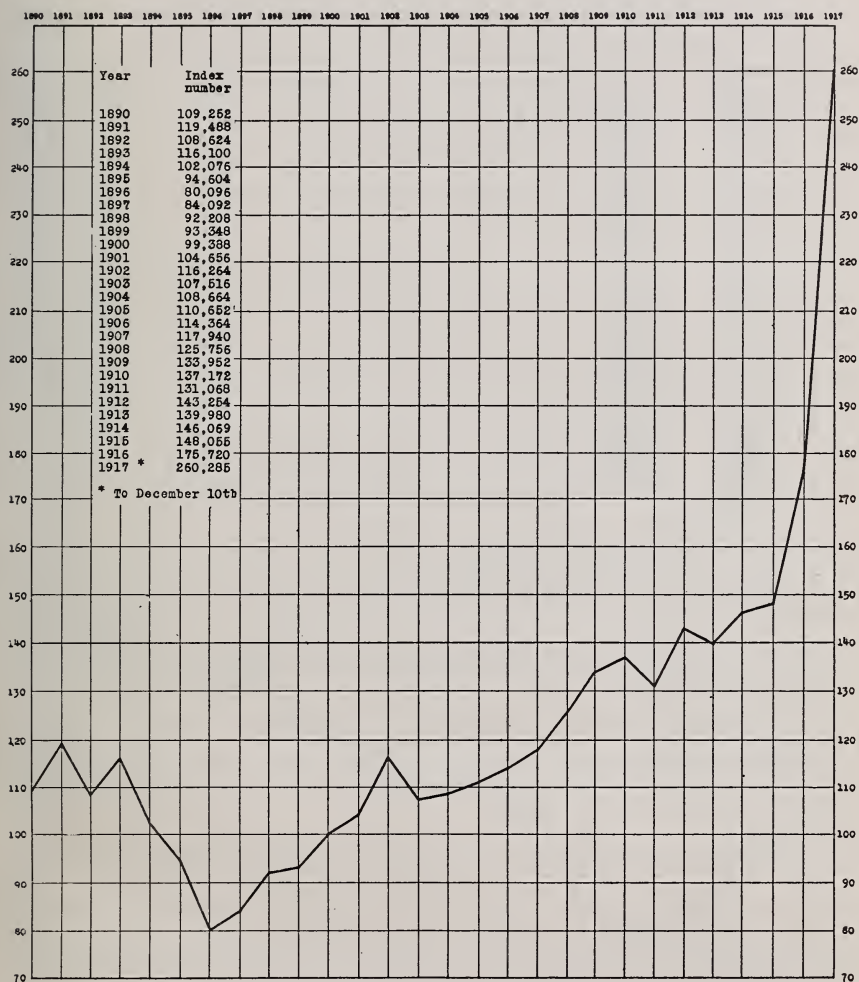
Farm and food products, fuel and lighting, cloths and clothing, so far as general household consumption is concerned, it will be noted, show the greatest increases for both periods for which comparisons are made. Metals and metal products and drugs and chemicals in their unusual advances reflect war demands for munitions and other purposes.



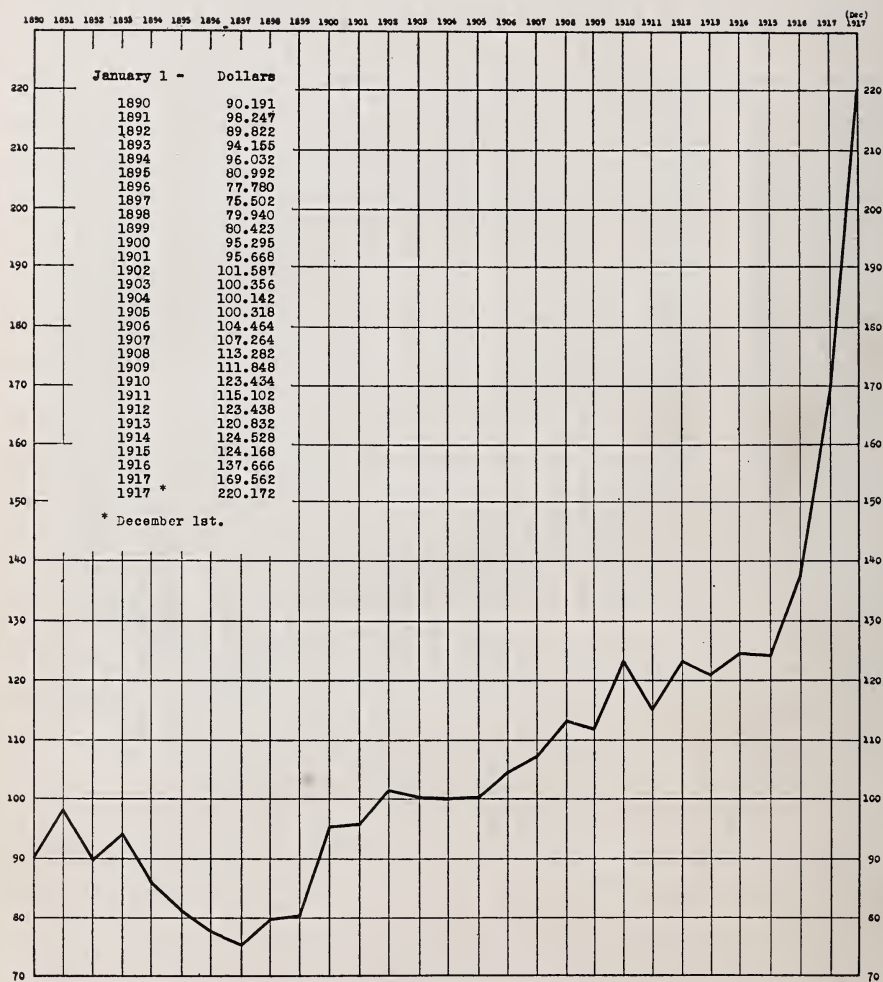
TREND IN WHOLESALE PRICES OF PRINCIPAL COMMODITIES AS INDICATED BY THE INDEX NUMBERS OF U. S. BUREAU OF LABOR STATISTICS, 1890-1917.



TREND IN WHOLESALE PRICES OF PRINCIPAL COMMODITIES AS INDICATED BY N. Y. TIMES ANNALIST YEARLY INDEX NUMBERS, 1890-1917.

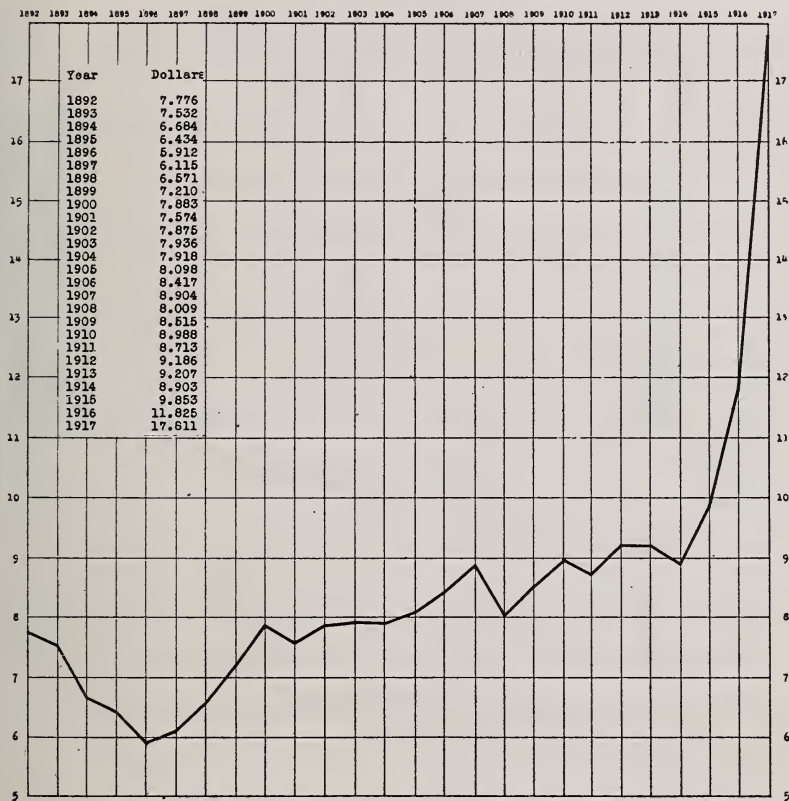


## TREND IN WHOLESALE PRICES OF PRINCIPAL COMMODITIES AS INDICATED BY DUN'S INDEX NUMBERS, 1890-1917.

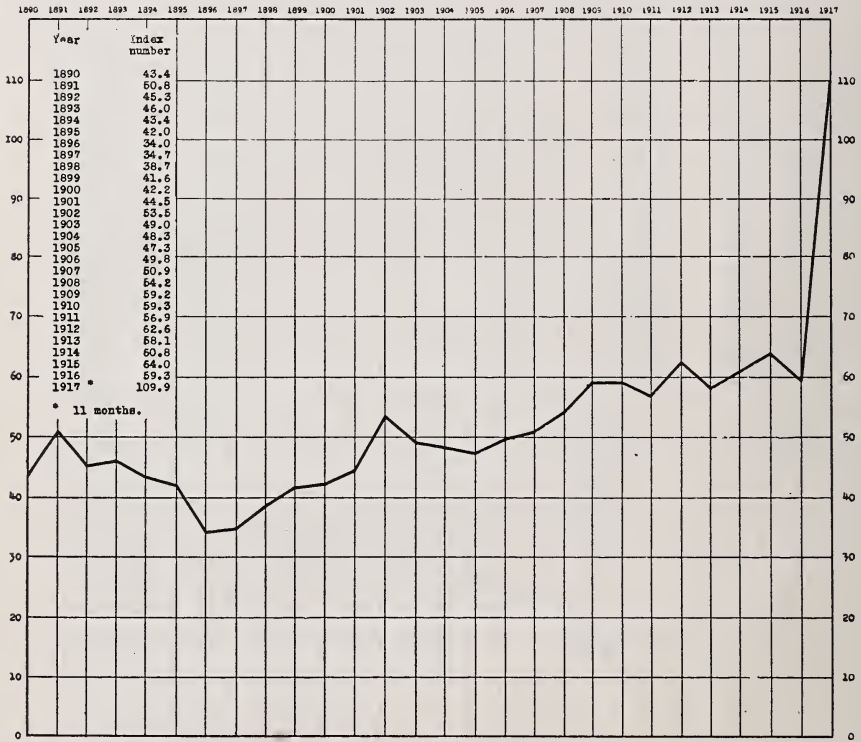




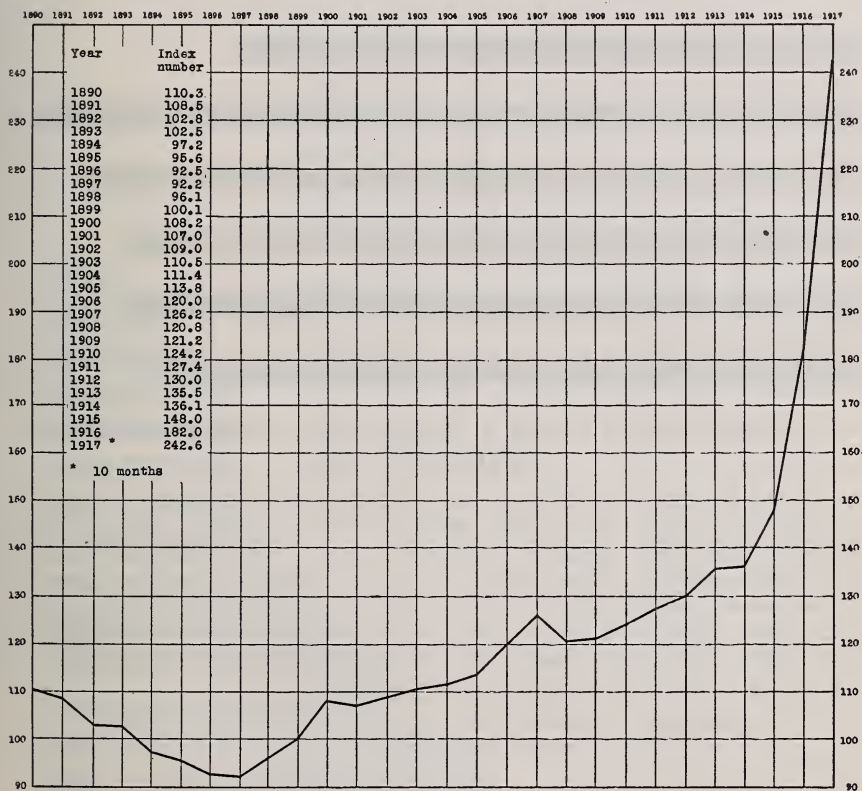
TREND IN WHOLESALE PRICES OF PRINCIPAL COMMODITIES AS INDICATED BY BRADSTREET'S YEARLY INDEX NUMBERS, 1892-1917.



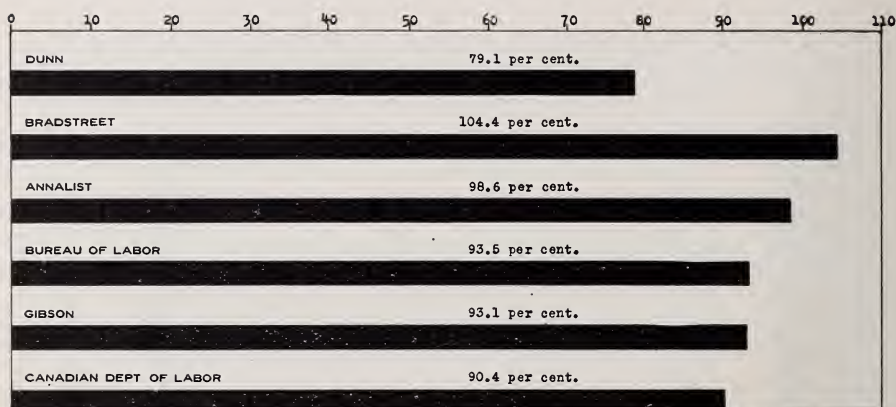
TREND IN WHOLESALE PRICES OF PRINCIPAL COMMODITIES AS INDICATED BY GIBSON'S AVERAGE YEARLY INDEX NUMBERS, 1890-1917.



TREND IN WHOLESALE PRICES OF PRINCIPAL COMMODITIES AS INDICATED BY CANADIAN DEPARTMENT OF LABOR INDEX NUMBERS, 1890-1917.



INCREASE IN WHOLESALE PRICES AS INDICATED BY REPRESENTATIVE INDEX NUMBERS, 1917 OVER 1911.



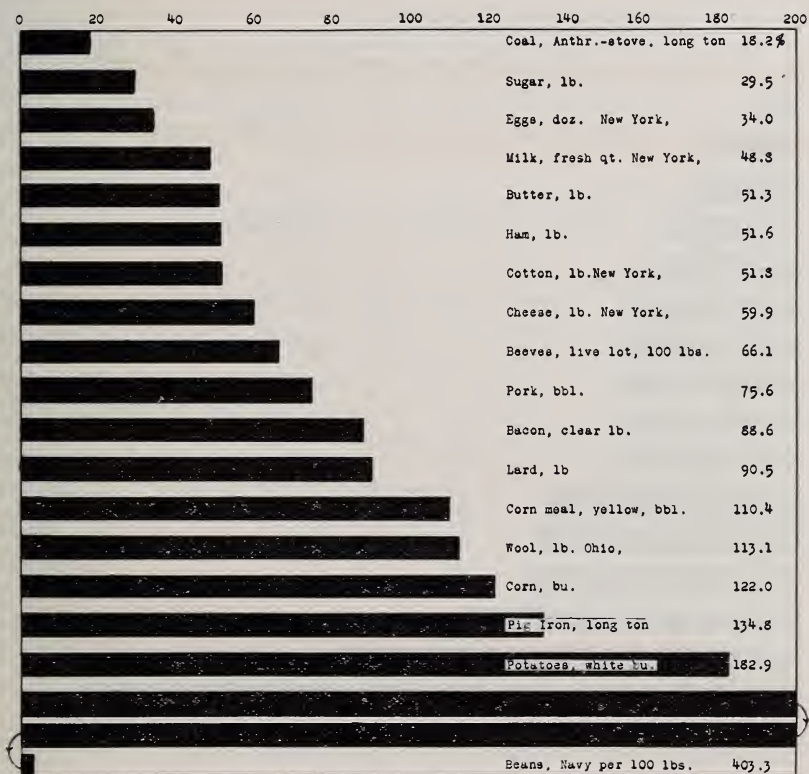
## 2.—WHOLESALE PRICES SINCE THE OUTBREAK OF THE EUROPEAN WAR.

Out of fourteen foodstuffs enumerated in the following table, the wholesale prices of six in June, 1917, were more than double, and in the case of one three times greater than what they were in July, 1914. The greater number of other articles of food advanced in price during the same period at least 75 per cent. The same was true of cotton and cotton yarns, while wool and worsted yarns increased in price more than 130 per cent. The percentages of increase for different commodities are shown in detail in the table which follows:

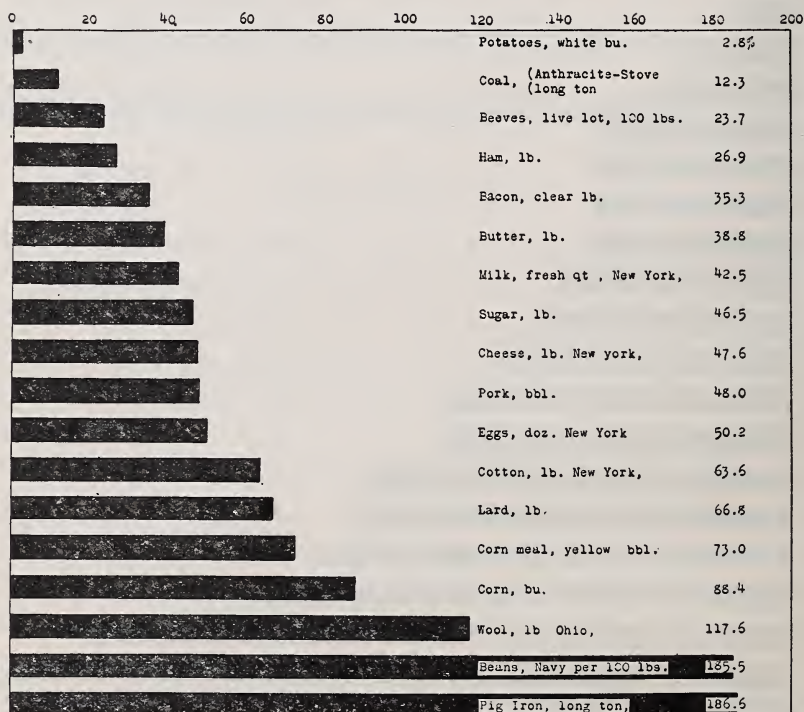
INCREASE IN WHOLESALE PRICES OF SELECTED COMMODITIES,  
JUNE, 1917, OVER JULY, 1914.

Article.	Per cent increase June, 1917, over July, 1914.
Cattle, good to choice steers.....	36.1
Beef, fresh, native steers.....	19.6
Beef, salt, mess.....	76.8
Hogs, heavy.....	79.1
Bacon, short clear sides.....	71.8
Pork, salt, mess.....	75.7
Lard, prime, contract.....	107.2
Wheat, No. 1, Northern.....	200.2
Flour, standard patent.....	102.4
Corn, No. 2, mixed.....	141.6
Meal, fine, yellow.....	173.7
Potatoes, white.....	144.5
Sugar, granulated.....	79.5
Hides, packers'.....	70.3
Cotton, upland, middling.....	93.8
Cotton yarns, carded 10-1.....	74.4
Wool, fine, fleece, scoured.....	134.6
Worsted yarns, 2-32s.....	138.5
Coal, bituminous.....	172.7
Copper, electrolytic.....	142.5
Pig lead.....	194.9
Pig tin.....	102.6
Pig iron, Bessemer.....	267.1
Steel billets.....	419.7
Spelter.....	90.7
Petroleum, crude.....	77.1

# INCREASE IN WHOLESALE PRICES OF PRINCIPAL ARTICLES, 1917 OVER 1911.



# INCREASE IN WHOLESALE PRICES OF PRINCIPAL ARTICLES, 1917 OVER 1914.





## CHAPTER III

### THE VALUE OF BUDGETARY STUDIES.

Statistics as to retail prices are valueless so far as their bearing upon family living costs are concerned, unless it is known what proportions of different classes of food, other articles, and services enter into the consumption of families of various incomes. When it is known what proportion of a family's outgo is for food, rent, fuel, clothing, and miscellaneous items, the retail prices of certain articles can be weighted according to their relative importance from a consumption standpoint, and the increased family living costs correctly ascertained. For this reason a number of original investigations have been made to ascertain these facts. Other studies have been made to determine the cost of a minimum family subsistence or of a minimum standard of comfort. Because of the great importance of these classes of investigations, they have been brought together and analyzed in the following sections.<sup>1</sup>

<sup>1</sup> For a reprint of the more important budgets, see Part II, Chapter III.

#### 1.—WEEKLY BUDGETS, 1911-1917.

The Canadian Department of Labor publishes each month an average workingman's family budget showing the weekly cost of staple foods, fuel and lighting, and rent.<sup>1</sup> Beginning with the year 1914, the Bureau of Labor of the State of Washington has also prepared each April a budget showing the weekly and annual cost to a family of five for groceries, fresh meat and fish, and fuel.<sup>2</sup> In 1917, as compared with 1914, the Canadian budget shows an advance in the cost of living for the items enumerated of 27.7 per cent, while the Washington budget, probably because of the exclusion of rent, shows an increase of 35.6 per cent. This general comparison, together with the advance in the detailed items of food, fuel and rent during the past six years, is set forth in the following table:

COMPARISON OF CANADIAN AND WASHINGTON (STATE) WEEKLY BUDGETS, 1911-1917.

Canadian Department of Labor.	1911.	1914.	1917.	Per cent increase 1917 over	
				1911.	1914.
Food.....	\$ 7.14	\$ 7.99	\$11.68	63.6	46.1
Fuel and lighting.....	1.78	1.90	2.40	34.6	26.5
Rent.....	4.05	4.54	4.36	7.7	<sup>3</sup> 14.1
Total.....	\$12.97	\$14.44	\$18.44	42.1	27.7
Washington Department of Labor.					
Food, groceries.....		\$4.57	\$6.48		41.9
Food, meat and fish.....		2.52	3.39		34.7
Fuel.....		1.01	1.10		9.2
Total.....		\$8.10	\$10.97		35.6

<sup>1</sup> See Part II, Chapter III.

<sup>2</sup> See Part II, Chapter III.

<sup>3</sup>Denotes decrease.

The food cost as shown by the Canadian budget in 1917, amounted on an annual basis to \$607.36; in the Washington budget to \$513.24. Assuming that the food cost was 40 per cent of the total outlays of the families from which data were secured, the total annual budget for an average workingman's family in Canada would have cost as far back as last August, \$1,518.40, and in the State of Washington, \$1,283.10.

In 1911, the Canadian budget, which is representative of American conditions, according to this basis of calculation, would have cost \$751, and \$1,039 in 1914. In other words, an average family in Canada, in 1911, would have required double its income to maintain the same standard of living in August, 1917. Assuming that the food and fuel cost of the Washington budget was 45 per cent of the whole, the total cost of this budget in 1914 would have been \$936, or \$347.10 less than in 1917.

In October, 1917, Inspector Graef, of the Department of Health, New York City, made a careful comparison of the costs of the various elements in a standard, palatable weekly dietary for a family of five in the largest cities of the United States.<sup>1</sup> The results of his study in terms of weekly and annual expenditures for food, by leading cities, was as follows:

Kind of food.	New York City.	Average of 24 cities throughout U. S.	Boston.	Chicago.	New Orleans.	San Francisco.
Canned goods.....	\$0.185	\$0.177	\$0.180	\$0.200	\$0.200	\$0.150
Cereals.....	2.943	3.144	2.202	3.153	3.022	2.902
Dried fruits.....	.690	.650	.670	.626	.625	.605
Sugar and syrup.....	.515	.570	.515	.537	.540	.581
Dairy products.....	3.340	3.343	3.925	3.165	2.801	2.950
Vegetables.....	.665	.673	.765	.685	.660	.582
Meats and fish.....	3.229	2.717	2.834	2.834	2.409	2.284
Condiments.....	.110	.110	.110	.110	.110	.110
Total weekly cost of food budget.....	\$12.953	\$12.685	\$12.451	\$12.593	\$11.929	\$11.460
Annual cost.....	673.40	659.36	647.40	654.68	619.36	595.92

The annual cost of this minimum food diet for a family of five ranges, as it will be noted, from \$595.92 in San Francisco to \$673.40 in New York City. The average of 24 cities throughout the United States was \$659.36, which would be representative of an annual income of \$1,500 to \$1,600.

<sup>1</sup> See Part II, Chapter III.

## 2.—A MINIMUM MONTHLY DIET AND ITS COST.

The cost of a minimum monthly diet upon which health can be maintained by a family of five has been estimated by Professor Jaffa, of the University of California, at \$45.32 per month, or \$543.84 annually. The cost of this diet he shows has advanced from \$27.09 a month in 1912, and \$29.66 a month in 1914, to \$45.32 in 1917, an increase of 67 per cent in the ten years, 1907-1917. The detailed statement of this diet and its increase in cost, is as follows:

## TABLE SHOWING INCREASE IN COST OF FOOD FROM MAY, 1907, TO MAY, 1917.

MINIMUM DIET ON WHICH HEALTH CAN BE MAINTAINED FOR A WORKINGMAN, HIS  
WIFE AND THREE CHILDREN BETWEEN FOUR AND FOURTEEN YEARS OF AGE.

Food materials.	Food and cost for one month.				
	Pounds.	1907.	1912.	1916.	1917.
<b>Class I—</b>					
Meat and fish.....	50	\$5.75	\$7.25	\$8.00	\$10.00
Milk.....	120	4.80	4.80	4.80	6.00
Eggs.....	6	.81	1.12	1.08	1.56
Beans.....	8	.40	.40	.40	1.60
<b>Class II—</b>					
Flour.....	60	1.88	1.92	1.92	4.80
Cereals.....	17	.49	.77	1.02	1.36
Macaroni.....	4	.28	.32	.32	.50
Rice.....	10	.60	.60	.60	.83
<b>Class III—</b>					
Potatoes.....	35	.70	1.05	1.05	2.17
Vegetables.....	55	1.38	1.65	1.65	1.65
Fruits.....	50	2.25	2.50	2.50	2.50
<b>Class IV—</b>					
Butter.....	8	2.29	2.55	2.40	3.60
Oils and fats.....	10	1.35	1.90	2.00	2.50
<b>Class V—</b>					
Sugar.....	25	1.38	1.53	1.75	2.25
<b>Extras—</b>					
Coffee and tea.....	2	.73	1.00	1.00	1.00
Sundries.....		2.00	2.30	2.50	3.00
<b>Total, per month.....</b>		<b>\$27.09</b>	<b>\$29.66</b>	<b>\$32.99</b>	<b>\$45.32</b>

Sundries include yeast, corn starch, cocoa, cheese, syrup, salt, etc.

### 3.—TENTATIVE BUDGET OF PHILADELPHIA BUREAU OF MUNICIPAL RESEARCH.

On December 20, 1917, the Bureau of Municipal Research of the City of Philadelphia, which was organized to promote efficient and scientific management of municipal business, submitted a tentative budget as a minimum standard of living for a workingman's family. It was accompanied by the following statement:

"A recent press notice of the Patriotic Education Society, in commenting upon the present labor situation, states that 'the Government must make a comprehensive study of living conditions in all sections of the United States. \* \* \* \* \* Then Government arbitrators can say, with real knowledge of conditions, what is a fair day's pay, instead of basing their decision on the argument of might.'

"The world tragedy now upon us is forcing us to think fundamentally on many issues that we have been wont to pass over superficially. In the statement quoted above we have a bit of fundamental thinking on the perennial issue of a 'fair day's pay' that is decidedly encouraging. The 'law of supply and demand,' which has served for so long to blind men to the real social significance of the wage question, is quietly

left out of account and 'living conditions' are frankly recognized as the vital factor in determining wages. In other words, we are asked henceforth to make the standard of living that we wish our citizens to maintain our prime concern in dealing with labor.

"The Bureau of Municipal Research is in hearty agreement with this view. As a matter of fact, in its endeavor to arrive at a 'fair day's pay' for laborers employed in the city government, it has begun an inquiry into the cost of living of a workingman's family in Philadelphia. As a result of this inquiry it is hoped to establish a standard of living, expressed in *actual goods and services*, that will enable a family to live in a manner befitting the citizens of a great democracy. \* \* \*

For this purpose we are submitting, as a basis for discussion merely, a tentative minimum standard expressed mainly, for the sake of brevity, in dollars and cents. \* \* \* Since this tentative standard is so *decidedly the minimum on which a family can exist*, we would be especially pleased to have your suggestions take the form of how much more ought to be added to make it a fair standard."

The budget submitted was as follows:

TENTATIVE MINIMUM STANDARD OF LIVING FOR A FAMILY OF FIVE, COMPOSED OF TWO ADULTS AND THREE CHILDREN UNDER INCOME-EARNING AGE.

Housing—\$15.00 per month.....	\$180.00
This provides from four to six rooms, depending upon locality.	
Fuel and light.....	75.00
Four and one-half tons of coal.....	\$ 39.38
Gas.....	33.80
Kindling, matches, etc.....	1.82
Food.....	590.00
Food.....	\$581.67
Ice.....	8.33
Clothing.....	166.00
Health.....	27.00
For services of physician, dentist, oculist and nurse, and also for surgical appliances, drugs, etc.	
Furniture and furnishings.....	20.00
Replacements of towels, bedding, dishes, breakage, etc.	
Taxes, dues and contributions.....	20.00
To government, churches, patriotic societies, etc.	
Recreation, vacation and amusements.....	15.00
Education and reading.....	11.00
School expenses.....	\$1.50
Newspaper.....	8.84
Postage and stationery.....	.66
Insurance.....	23.40
Carfare.....	32.30
To and from work and one dollar for the rest of the family for the year.	
Cleaning, supplies and services.....	20.00
Soap, washing material, brooms, brushes, laundry, etc.—thirty-eight cents per week.	
Other expenses.....	20.30
Includes funeral expenses, moving expenses, tobacco and refreshments.	
Total.....	\$1,200.00



#### 4.—REVISIONS AND TESTIMONY OF SHIPBUILDERS.

At a hearing held by the Labor Adjustment Board of the Emergency Fleet Corporation in Philadelphia during the month of January, 1918, representatives of the shipyards employees held that the budget of the Bureau of Municipal Research fell short of the minimum requirements by \$231.30 annually. They revised the budget by additions to the various items as follows:

Housing.....	\$240.00
Fuel and light.....	90.00
Food.....	640.00
Clothing.....	226.00
Health.....	27.00
Furniture and furnishings.....	50.00
Taxes, etc.....	30.00
Education and reading.....	12.50
Insurance.....	39.00
Carfare.....	36.50
Cleaning, supplies, etc.....	20.00
Other expenses.....	20.30
Total.....	\$1431.30

#### 5.—ANNUAL BUDGETS TO COVER A MINIMUM OF SUBSISTENCE AND COMFORT.

To maintain a minimum standard of comfort—not only to cover Subsistence, but also the minimum requirement of education, recreation, and well-being—according to the most recent estimates, requires an annual income or wage of approximately \$1,500. <sup>1</sup>This is indicated by the partial budgetary studies and estimates which have already been submitted. The most detailed and scientific estimates, however, as to this standard are furnished by the budgets below. During the latter half of 1917, the street railway employees of Tacoma and Seattle, Washington, submitted a demand for higher wages to an arbitration board. Exhaustive documentary and personal evidence was submitted as to the cost of maintaining a minimum standard of comfort. On the basis of this estimate, the counsel for the employees prepared a budget for the purpose of showing that a minimum annual wage of \$1,917.88 was necessary. The members of the arbitration board, after their own analysis of the evidence supplemented by an original investigation by the faculty of the Department of Economics of the University of Washington, awarded the street railwaymen a budget of \$1,505.60, or, in other words, it was stated as the final decision of the board that an annual wage of this amount was necessary, and the hourly rates of pay were fixed with the object of yielding \$1,505.60 to each employee, as a minimum.

This budgetary estimate was closely approximated by a contemporary and independent study by Dr. Jessica B. Peixotto, of the faculty of the University of California. She showed that \$1,476.40 was required annually under existing conditions to maintain a decent minimum of comfort for an average workingman's family of five—husband, wife, and three children under the working age.

The details of these three budgets are set forth summarily in comparative form in the following table:

<sup>1</sup> See Part II, Chapter III.

ANNUAL BUDGETS TO COVER A MINIMUM OF SUBSISTENCE AND COMFORT FOR AN  
AVERAGE WORKINGMAN'S FAMILY.

Items.	Proposed by Seattle street railway employees.	Awarded by Arbitration Board to Seattle employees.	Dr. Jessica B. Peixotto.
Groceries, meats and fish.....	\$540.95	\$533.40	\$540.00
Fuel.....	59.70	60.00	36.00
Clothing.....	611.87	291.50	288.40
Maintenance of household equipment.....	60.00	40.00	132.00
Education.....	12.00	11.00	.....
Church and fraternal organizations.....	12.00	20.00	.....
Dentistry, medicines, etc.....	60.00	60.00	.....
Insurance.....	120.00	30.00	.....
Reading matter.....	30.00	<sup>1</sup>	.....
Savings.....	120.00	100.00	.....
Gas (household use).....	22.16	20.00	.....
Electric light.....	12.00	15.00	.....
Rent and water.....	180.00	184.00	240.00
Street car fare.....	65.00	35.70	.....
Tobacco, ice cream, etc.....	12.20	30.00	.....
Incidentals, stamps, barber, etc.....	.....	25.00	.....
Miscellaneous.....	.....	20.00	.....
Sundries.....	.....	.....	270.00
Total.....	\$1,917.88	\$1,505.60	\$1,476.40

<sup>1</sup> Included in education.

<sup>2</sup> Includes household operation.

## 6.—SCIENTIFIC STUDY OF INCREASED BUDGETARY COSTS.

The Bankers Trust Company of New York, at the close of 1917, made an exhaustive study of increased family living costs as a basis for salary bonuses to its employees. The methods employed and results obtained were described in the New York Times Annalist of January 14, 1918. Because of their great value, the article of the Annalist is reproduced below:

"How much has the cost of living increased since 1915? How much more does the average head of a family pay now for rent, food and clothing than he did two years ago? The question interests every family in the country, yet the average man, or woman, knows little more than that expenses are rising faster than income can keep pace, with the result that attempts to bring receipts and expenditures into a relation more nearly approaching that on which family budgets were based a year or so ago frequently take the form of misdirected efforts at economy which must be abandoned when their futility, or impossibility, becomes apparent.

"Index numbers on the cost of living, such as are prepared weekly by the Annalist, by Bradstreet's, and others, indicate the trend of prices. In the case of the Annalist they show the fluctuations in the average wholesale prices of twenty-five food commodities selected and arranged to represent a theoretical family's food budget. But at best they consider price changes as a whole and afford no information to the man who wishes to know the proportionate and relative increases in the costs of the items which comprise his daily expenditures.

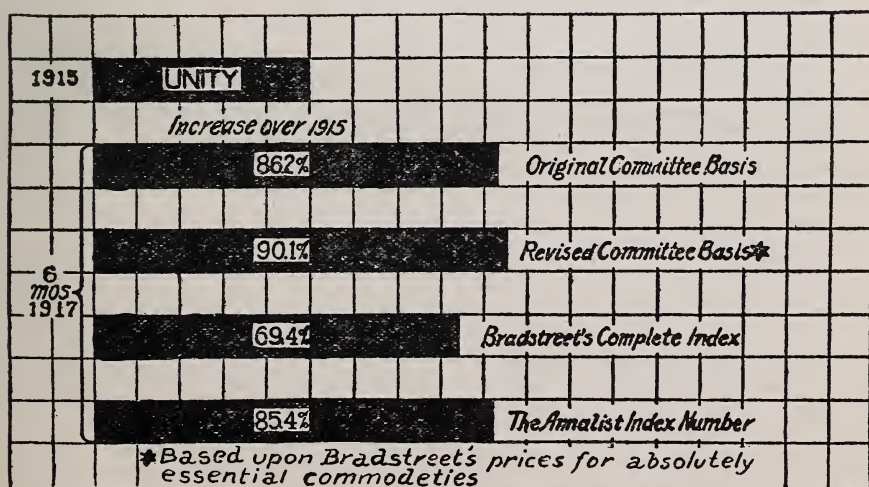


"With these points in mind, Seward Prosser, President of the Bankers Trust Company, facing the duty of apportioning bonuses among his employees to compensate them for the increased cost of living, recently hit upon the plan of enlisting the aid of those who were to benefit by the apportionment by requiring them to keep a record of their daily expenditures so that an actual, rather than a theoretical, basis on which to make the distribution might be obtained.

"An account of the operation of this plan and the work of the committee that directed it follows, and it is indicative of the merit of the index number that the increase in living cost for the last six months of 1917 over 1915, disclosed by averaging the actual records kept by individual members of the staff of the trust company, differs from the percentage increase shown by the Annalist index number by less than a single per cent. Accompanying is a chart prepared by the committee to show the 'Relative Average Price of Food and Clothing' for the last six months of 1917 over the year 1915.

"The first task of the committee, of which J. H. Lewis was Chairman, with G. F. Trefcer, C. O. Cornell, Herman Knoke, and Charles C. Gardner as associates, was to determine the relative parts of his salary which the average bank clerk expends for rent, food, and clothing. In Chapin's 'New York Study' the committee obtained a table which it selected 'as the best available authority as to proportions of salary bases which are applicable to the necessities of life.' From records supplied by its own members and other employees of the trust company the committee then amended this table to the standard of living of the trust company employees.

#### RELATIVE AVERAGE PRICE OF FOOD AND CLOTHING.



## PERCENTAGE PRICE INCREASE.

	"A"	"B"	"C"	"D"	"E"	"F"
Fresh vegetables:						
Potatoes.....		35.0	172.0			165.0
Sweet potatoes.....						98.0
Cabbage.....						181.0
Onions.....						103.0
Beans.....						163.0
Grains:						
Wheat.....						127.0
Corn.....						177.0
Barley.....						122.0
Buckwheat.....						122.0
Raw material:						
Cotton.....						122.0
Wool.....						136.0
Meats:						
Sirloin steak.....			44.0	52.2	50.0	
Round steak.....			48.0	48.0		
Rib roast.....			50.0	71.5	37.0	
Chuck roast.....			57.0	45.7		
Plate roast.....			45.0			
Pork chops.....			78.0			
Bacon.....			90.0		84.0	
Ham.....			88.0	89.7	69.0	
Mutton.....				49.5		
Pork loin.....				91.0	93.0	
Lamb.....			69.0			82.0
Hogs.....						103.0
Beef.....						38.0
Groceries—canned goods:						
Beans.....	64.9					
Corn.....	160.9	146.0				
Peas.....	104.6	90.0				
Spinach.....		111.0				
Tomatoes.....	174.0	127.0				
Peaches.....	75.9	66.0				
Pineapples.....	69.6	58.0				
Baked beans.....		128.0				
Evaporated milk.....		63.0				
Staples:						
Flour.....	85.2	87.0	99.0			
Sugar.....	45.7	51.0	58.0			
Butter.....	49.4	51.0	64.0			35.0
Cheese.....	53.9					
Rice.....		59.0				
Eggs.....		55.0	54.0			28.0
Lard.....		140.0	83.0			
Coffee.....		16.0				
Tea.....		21.0				
Bread.....		66.0	100.0			
Milk.....			55.0			22.0
Cornmeal.....			180.0			
Fabrics, etc.:						
Table linen.....						195.0
Women's stockings, three-quarter silk.....						56.0
Women's stockings, cotton.....						47.0
Shoes.....						49.0
Women's underwear.....						50.0
Men's underwear, wool.....						110.0
Men's underwear, cotton.....						50.0

## PER CENTS OF SALARY EXPENDED FOR

Salary.	Committee Table			Chapin's Table		
	Food.	Clothing.	Rent.	Food.	Clothing.	Rent.
Bases.	P. C.	P. C.	P. C.	P. C.	P. C.	P. C.
\$500- \$599. ....	45	12.4	25	44.4	12.4	25.9
600- 699. ....	45	12.9	25	44.6	12.9	23.6
700- 799. ....	45	13.4	25	45.6	13.4	21.9
800- 899. ....	45	14	25	44.3	14.0	20.7
900- 999. ....	45	14.6	25	44.7	14.6	19.0
1,000-1,099. ....	45	15.5	25	44.7	15.5	18.1
1,100-1,199. ....	45	15.5	25	45.6	14.9	16.2
1,200-1,299. ....	45	17	24	45.0	15.2	19.8
1,300-1,399. ....	44½	17.2	24	43.6	13.7	16.8
1,400-1,499. ....	44	17.4	24	36.8	16.8	16.3
1,500-1,599. ....	43½	17.6	24	.....	.....	.....
1,600-1,699. ....	43	17.8	24	.....	.....	.....
1,700-1,799. ....	42½	18	24	.....	.....	.....
1,800-1,899. ....	42	18.2	24	.....	.....	.....
1,900-1,999. ....	41½	18.5	23	.....	.....	.....
2,000-2,099. ....	40	18.8	23	.....	.....	.....
2,100-2,299. ....	38½	19.1	22	.....	.....	.....
2,300-2,399. ....	37	19.7	21	.....	.....	.....
2,400-2,499. ....	37	20	20	.....	.....	.....
2,500 and up. ....	35	20	20	.....	.....	.....

"With this as a basis the committee set about determining the actual percentage increase in the cost of food, rent, and clothing. An increase of 10 per cent over the cost in 1915 was considered representative of the rise in the cost of rent, including fuel. To fix the increase in the price of food and clothing the committee employed the Annalist and Bradstreet indexes, supplemented by data furnished by committee members and other employees, and by figures reported by trade and Government publications.

"From these sources the accompanying table was drawn up showing the percentage increase in the cost of fresh vegetables, grains, raw materials, meats, groceries, staples, and fabrics. Where possible, comparisons were made for the whole year 1915 and the last half of 1917. In some instances, however, prices for given periods in 1915 had to be compared with prices for periods in 1917. The 'A' column was derived from American Grocer prices to jobbers, the 'B' column from a chain-store organization, the 'C' column from the United States Labor Bureau in New York, the 'D' column from The Butchers' and Packers' Gazette, the 'E' column from a department store, and the 'F' column from monthly crop reports of the United States Department of Agriculture.

"For the purposes of the committee it was assumed that the increase in living cost began to show alarming proportions in July, 1916, and the greatest compensation was apportioned to those who had been in the service of the company prior to that date, the amounts being proportionately reduced for lesser terms of employment. Although their investigations showed that the increase was slightly more, the committee took 80 per cent as a basis on which to make its adjustments and the trust company afterward authorized its findings. On this scale tables

were prepared showing the approximated percentages of compensation to salary, and the actual amounts, at various salary bases and for varying terms of service, necessary to offset the increased cost of living for the six months ended last year. The percentages for those employed prior to July 1, 1916, are given here:

Annual salary bases.	Percentage, Inc.
\$500- \$599.....	48.4
600- 699.....	48.8
700- 799.....	49.2
800- 899.....	49.7
900- 999.....	50.2
1,000-1,099.....	50.9
1,100-1,199.....	50.9
1,200-1,299.....	52.0
1,300-1,399.....	51.8
1,400-1,499.....	51.5
1,500-1,599.....	51.2
1,600-1,699.....	51.0
1,700-1,799.....	50.8
1,800-1,899.....	50.6
1,900-1,999.....	50.3
2,000-2,099.....	49.3
2,100-2,199.....	48.3
2,200-2,299.....	48.3
2,300-2,399.....	47.5
2,400-2,499.....	47.6
2,500 and up.....	*

\*A fixed sum of \$575.

"These percentages were arrived at as follows: Taking the case of an employee receiving \$2,000 a year salary, it was found by reference to the amended Chapin table that he spent 40 per cent of his salary, or \$800 a year, for food; 18.8 per cent, or \$376 a year, for clothing, and 23 per cent, or \$460 a year, for rent. Figuring an 80 per cent increase in the cost of food and clothing, it was assumed that this man spent \$940.80 additional for these items, and, allowing for a 10 per cent increase in rent, added \$46 more, a total of \$986.80 for the year, or \$493.40 for the last six months of the year, a percentage of 49.34 of his salary.

"The conclusions of this banking committee are probably applicable to a large share of the community whose manner of living compares to that of the investigators, and their findings are of interest even to the man who cannot look forward to the receipt of a bonus to cover his increased expenses. At least he can discover the sources from which come the strongest attacks on his income and, so far as these may be offset by hard-practiced economy, the committee findings offer him a guide where best to aim his efforts.



## 7.—CHANGES IN THE STANDARD OF LIVING IN THE DISTRICT OF COLUMBIA AS AFFECTED BY THE INCREASED COST OF LIVING

The Bureau of Labor Statistics has made comparable studies of the cost of living in the District of Columbia for widely separate years, namely, 1901 and 1916. The study for 1901 is contained in its Eighteenth Annual Report of the cost of living, which appeared in 1904, and forms part of the larger study for the whole United States for that period. The second was made in 1916 and the results of the investigation published in the 1917 issue of the Monthly Review for October, November and December.

The study applies to the average-sized family of a wife, husband and three children. The families in each case are divided into certain well marked income groups. It is possible to compare expenditures for different items of expenditures made by the families in similar income groups in 1901 and 1916. The first table below shows the actual amounts expended for the items of food, clothing, rent, fuel and lighting and sundries for each group of families in five different income classes.

Table 1 below shows the actual expenses, and Table 2 the percentage distribution of the same items of expenditures.

Taking the income group in which the families earn \$1100 and under \$1200 per year, it appears that in 1900, families of that amount of income spent 40.3 per cent for food, while in 1916 they were compelled to spend 42.5 per cent of their income for food. The families of 1916, presumably because of the increased cost of necessities, such as food, had only 9 per cent to spend for clothing as against 13.8 per cent in 1900, and 21.4 per cent for sundries such as insurance, club dues, amusements, in a word, the "cultural wants," as against 23 per cent for families in 1900. Families in 1917 were compelled to increase their expenditures for fuel and lighting to 6.9 per cent of their budget over 5.1 per cent in 1900.

Similar changes of the ones outlined above for the income class \$1100 and under \$1200 per annum are shown in all the other income groups. There is clearly evident a reduction in the standard of living in 1916, over 1900 for similar income groups.





## PART II

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OFFICIAL, DOCUMENTARY AND OTHER AUTHORITY-  
TATIVE DATA RELATIVE TO PRICES, FAMILY  
BUDGETS, AND INCREASED LIVING COSTS.



# CHAPTER I

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## RETAIL PRICES

### 1.—SCOPE OF STUDY AND METHOD OF OBTAINING PRICES BY UNITED STATES BUREAU OF LABOR STATISTICS.

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The United States Bureau of Labor Statistics since the year 1907 has published annual returns as to retail prices in the principal cities of the country. From these data have also been worked out relative prices for the principal articles of foodstuffs for the country as a whole.

According to the preliminary statement of the last annual report there are sent to the Bureau from 46 of the most important industrial cities in the various sections of the United States, returns as to retail prices of the principal articles of food, the weight and prices of the principal brands of wheat bread, the retail prices of articles of dry goods, the retail prices of anthracite and bituminous coal, and of gas for household use. "Data are furnished to the Bureau," the report states, "by approximately 725 retail stores, 150 bakeries, 215 retail coal dealers, 66 gas companies, and 205 dry-goods companies.

"Excellent results have followed the use of the form books for reporting prices. Over 90 per cent of the reports for January to December, 1916, requested from retail merchants, dairymen and bakers were received. A number of merchants have also stated that the stub record of prices was of considerable value to them, as it is an easy method of preserving a record of prices each month from year to year. In several cities practically every report requested from merchants, dairymen, and bakers has been received each month. This is notably true for Atlanta, Baltimore, Indianapolis, New York, Pittsburgh, and St. Louis. Almost every coal firm, gas company, and dry-goods merchant from whom price statements were requested has also responded to the request.

"The 46 cities included in this report are important industrial cities, representing 33 States. In a general way the city selected in each section of the country was the city having the largest population in that section; but, in addition, six smaller cities were included as being industrially important in those sections. The six cities are Bridgeport, Conn.; Butte, Mont.; El Paso, Tex.; Fall River, Mass.; Scranton, Pa.; and Springfield, Ill.

"Within the 46 cities live one-fifth of the total number of people, two-fifths of the urban population, and approximately one-third of the total number engaged in gainful occupations (not including those in agricultural pursuits) in continental United States."

## 2.—INDEX NUMBERS OF RETAIL PRICES OF ALL ARTICLES OF FOOD, 1907-1917.

Taking the retail prices of the 15 articles of food as a whole for which returns are secured, the Bureau has constructed, according to the relative articles of foodstuffs in the budget of a typical workingman's family, an index number of retail prices for the ten years, 1907-1917. The results of these computations are set forth in the table below, which shows by years the index numbers of retail prices of food, 1907-1916, and, by months, January-October, 1917.

### INDEX NUMBERS OF RETAIL PRICES OF FOOD, 1907 TO OCTOBER, 1917.

Year	Retail Prices of Food.
1907.....	100
1908.....	103
1909.....	108
1910.....	113
1911.....	112
1912.....	119
1913.....	122
1914.....	125
1915.....	123
1916.....	139
January, 1917.....	156
February, 1917.....	162
March, 1917.....	162
April, 1917.....	177
May, 1917.....	184
June, 1917.....	185
July, 1917.....	178
August, 1917.....	181
September, 1917.....	187
October, 1917.....	192

## 3.—AVERAGE AND RELATIVE PRICES OF FIFTEEN ARTICLES OF FOOD, 1912-1917.

The table next presented shows both the average and relative prices of 27 principal foodstuffs by years, 1912-1916, and for October, 1917. It has been compiled from the records of the United States Bureau of Labor Statistics.

AVERAGE AND RELATIVE RETAIL PRICES OF FIFTEEN PRINCIPAL ARTICLES  
OF FOOD, BY YEARS AND BY ARTICLES, 1912-1917

Article.	Unit.	Average Money Price, September 15.					
		1912	1913	1914	1915	1916	1917
Sirloin steak.....	Lb.....	\$0.246	\$0.262	\$0.270	\$0.265	\$0.284	\$0.333
Round Steak.....	Lb.....	.208	.233	.247	.238	.257	.296
Rib roast.....	Lb.....	.191	.199	.208	.204	.218	.259
Chuck roast.....	Lb.....	.179	....	.179	.165	.177	.218
Plate beef.....	Lb.....	.131	....	.131	.123	.131	.163
Pork chops.....	Lb.....	.220	.227	.236	.225	.261	.388
Bacon.....	Lb.....	.255	.281	.290	.270	.296	.442
Ham.....	Lb.....	.253	.282	.291	.262	.332	.409
Lard.....	Lb.....	.154	.161	.156	.138	.222	.296
Hens.....	Lb.....	.203	.215	.219	.208	.243	.302
Salmon, canned....	Lb.....	....	....	....	.198	.202	.277
Eggs.....	Doz.....	.349	.375	.368	.349	.413	.525
Butter.....	Lb.....	.359	.378	.378	.335	.390	.496
Cheese.....	Lb.....	....	....	....	.227	.230	.335
Milk.....	Qt.....	.086	.089	.089	.088	.091	.118
Bread.....	16 oz. loaf <sup>1</sup>	....	....	.057	.062	.068	.088
Flour.....	Lb.....	.034	.033	.037	.038	.048	.073
Corn meal.....	Lb.....	.031	.031	.033	.033	.034	.082
Rice.....	Lb.....	....	....	....	.091	.091	.108
Potatoes.....	Lb.....	.016	.019	.018	.014	.028	.045
Onions.....	Lb.....	....	....	....	.030	.046	.046
Beans, navy.....	Lb.....	....	....	....	.076	.121	.188
Prunes.....	Lb.....	....	....	....	.135	.134	.163
Raisins, seeded....	Lb.....	....	....	....	.125	.129	.148
Sugar.....	Lb.....	.062	.057	.079	.065	.077	.098
Coffee.....	Lb.....	....	....	....	.299	.299	.305
Tea.....	Lb.....	....	....	....	.546	.546	.612
All articles combined	.....	....	....	....	....	....	....

Article.	Unit.	Relative Price, September 15.					
		1912	1913	1914	1915	1916	1917
Sirloin steak.....	Lb.....	90	96	99	97	104	122
Round steak.....	Lb.....	85	95	101	97	105	121
Rib roast.....	Lb.....	90	94	98	96	103	122
Chuck roast.....	Lb.....	104	...	104	96	103	127
Plate beef.....	Lb.....	102	...	102	96	102	127
Pork chops.....	Lb.....	97	100	104	99	115	171
Bacon.....	Lb.....	89	98	101	94	103	154
Ham.....	Lb.....	86	96	99	89	113	139
Lard.....	Lb.....	88	92	89	79	127	169
Hens.....	Lb.....	86	91	93	88	103	128
Salmon, canned....	Lb.....	...	...	...	98	100	137
Eggs.....	Doz.....	93	100	98	93	110	140
Butter.....	Lb.....	91	96	96	85	99	126
Cheese.....	Lb.....	...	...	...	88	89	130
Milk.....	Qt.....	95	98	98	97	100	130
Bread.....	16 oz. loaf <sup>1</sup>	...	...	87	96	105	135
Flour.....	Lb.....	78	74	84	87	110	166
Corn meal.....	Lb.....	92	91	97	96	100	241
Rice.....	Lb.....	...	...	...	100	100	119
Potatoes.....	Lb.....	61	71	68	51	104	111
Onions.....	Lb.....	...	...	...	61	94	94
Beans, navy.....	Lb.....	...	...	...	69	110	171
Prunes.....	Lb.....	...	...	...	101	100	122
Raisins, seeded....	Lb.....	...	...	...	97	100	115
Sugar.....	Lb.....	77	71	99	81	96	123
Coffee.....	Lb.....	...	...	...	100	100	102
Tea.....	Lb.....	...	...	...	100	100	112
All articles combined	.....	86	90	94	89	104	134

<sup>1</sup>16 ounces, weight of dough.

The table which is next submitted supplements the preceding table and carries the comparison as to prices back to 1907. It shows relative retail prices of 27 leading articles of food by years for the period 1907-1916, and by months from January, 1912, up to and including September, 1917.

RELATIVE RETAIL PRICES OF FOODSTUFFS, BY YEARS, 1907-1916 AND BY MONTHS, JANUARY 1912-SEPTEMBER 1917.

(Compiled from the Reports of the U. S. Bureau of Labor Statistics.)  
[Average price for 1916=100.]

Year or month.	Sir- loin steak.	Round steak.	Rib roast.	Chuck roast.	Plate boiling beef.	Pork Chops.	Bacon.	Ham.	Lard.
1907.....	66	62	71	.....	.....	69	70	69	73
1908.....	68	65	73	.....	.....	70	72	71	73
1909.....	71	67	76	.....	.....	76	78	75	81
1910.....	75	71	79	.....	.....	85	89	84	94
1911.....	75	72	79	.....	.....	79	86	82	80
1912.....	85	81	87	.....	.....	84	85	83	84
1913.....	93	91	93	.....	.....	92	94	92	90
1914.....	95	96	96	100	99	97	96	93	89
1915.....	94	94	94	95	95	89	94	89	84
1916.....	100	100	100	100	100	100	100	100	100
1912.									
January.....	76	73	79	.....	.....	75	81	79	78
February.....	76	73	80	.....	.....	72	80	79	78
March.....	78	74	81	.....	.....	75	80	79	78
April.....	81	78	85	.....	.....	84	82	81	80
May.....	87	83	90	.....	.....	85	84	83	84
June.....	88	85	92	.....	.....	84	84	83	85
July.....	89	85	91	.....	.....	85	85	84	85
August.....	91	86	92	.....	.....	92	85	84	86
September.....	90	85	90	.....	.....	97	89	86	88
October.....	88	84	89	.....	.....	97	91	86	91
November.....	86	82	88	.....	.....	86	91	86	91
December.....	86	82	87	.....	.....	79	90	85	90
1913.									
January.....	87	84	88	.....	.....	82	89	86	88
February.....	88	84	89	.....	.....	83	89	86	88
March.....	90	87	91	.....	.....	89	91	89	89
April.....	93	91	94	.....	.....	94	93	90	90
May.....	94	91	94	.....	.....	92	94	91	90
June.....	95	92	95	.....	.....	91	95	93	90
July.....	97	95	95	.....	.....	95	97	96	91
August.....	97	95	95	.....	.....	96	98	97	92
September.....	96	95	94	.....	.....	100	98	96	92
October.....	94	95	94	.....	.....	99	97	94	91
November.....	93	93	93	.....	.....	95	95	92	91
December.....	92	92	94	.....	.....	89	93	90	90
1914.									
January.....	92	93	93	98	96	91	92	90	90
February.....	93	93	94	98	97	92	92	90	90
March.....	93	94	94	98	97	92	93	90	89
April.....	93	94	95	99	97	95	93	91	89
May.....	95	95	95	99	98	98	93	91	89
June.....	96	97	96	100	98	95	94	92	88
July.....	99	100	98	102	99	98	95	95	88
August.....	102	103	101	105	102	110	100	99	89
September.....	99	101	98	104	102	104	101	99	89
October.....	96	97	97	101	100	101	100	96	89
November.....	93	96	96	97	100	96	98	93	89
December.....	94	94	94	96	98	86	97	91	88



## RELATIVE RETAIL PRICES OF FOODSTUFFS, BY YEARS, 1907-1916 AND BY MONTHS, JANUARY 1912-SEPTEMBER 1917—Continued.

[Average price for 1916=100.]

Year or month.	Sir- loin steak.	Round steak.	Rib roast.	Chuck roast.	Plate boiling beef.	Pork chops.	Bacon.	Ham.	Lard.
1915.									
January.....	93	93	94	95	97	82	95	90	88
February.....	91	91	93	94	96	79	93	88	87
March.....	90	90	92	93	95	78	92	87	87
April.....	92	91	93	93	95	87	92	86	86
May.....	94	94	94	95	96	92	92	87	86
June.....	96	96	96	96	96	91	93	89	86
July.....	97	98	97	97	96	93	94	90	83
August.....	97	97	96	97	96	95	94	89	80
September.....	97	97	96	96	96	99	94	89	79
October.....	95	95	95	96	95	102	95	90	82
November.....	94	93	94	94	94	92	95	91	83
December.....	92	92	93	93	93	81	95	92	83
1916.									
January.....	94	93	94	94	94	82	95	100	100
February.....	94	93	95	94	95	85	95	101	101
March.....	96	95	97	96	97	96	96	103	104
April.....	99	98	99	100	100	99	98	106	107
May.....	102	102	102	102	102	101	99	108	115
June.....	105	106	105	106	105	102	100	109	117
July.....	105	106	104	104	103	103	101	110	119
August.....	104	105	103	103	101	107	102	111	120
September.....	104	105	103	103	102	115	103	113	127
October.....	101	101	100	101	101	109	104	113	132
November.....	99	99	99	99	100	103	104	113	146
December.....	98	98	99	98	100	98	104	113	148
1917.									
January.....	101	101	102	101	103	104	103	104	122
February.....	105	106	106	108	110	115	107	108	125
March.....	108	109	110	112	114	123	116	115	136
April.....	116	118	119	123	126	135	133	124	151
May.....	118	121	121	127	130	135	145	132	159
June.....	120	123	123	129	133	136	148	133	160
July.....	120	125	121	127	129	139	149	135	157
August.....	121	126	120	126	134	152	150	134	158
September.....	122	121	122	127	127	171	154	139	169

## RELATIVE RETAIL PRICES OF FOODSTUFFS, BY YEARS, 1907-1916 AND BY MONTHS, JANUARY 1912-SEPTEMBER 1917=Continued.

[Average price for 1916=100.]

Year or month.	Hens.	Sal-mon, canned.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.
1907.....	74	.....	77	83	.....	85	.....	71	78
1908.....	75	.....	79	83	.....	88	.....	75	82
1909.....	80	.....	85	88	.....	89	.....	81	83
1910.....	85	.....	90	91	.....	93	.....	80	84
1911.....	82	.....	86	85	.....	94	.....	76	84
1912.....	84	.....	91	95	.....	95	.....	78	90
1913.....	90	.....	92	97	.....	98	.....	74	89
1914.....	92	.....	94	92	.....	98	86	77	93
1915.....	88	98	91	91	90	97	96	93	96
1916.....	100	100	100	100	100	100	100	100	100
1912.									
January.....	81	.....	117	109	.....	95	.....	77	87
February.....	82	.....	107	100	.....	95	.....	77	87
March.....	85	.....	73	94	.....	95	.....	77	87
April.....	87	.....	70	95	.....	95	.....	78	89
May.....	87	.....	69	92	.....	94	.....	81	92
June.....	84	.....	70	86	.....	94	.....	82	92
July.....	84	.....	76	85	.....	94	.....	81	92
August.....	85	.....	82	86	.....	95	.....	79	92
September.....	86	.....	93	91	.....	95	.....	78	92
October.....	85	.....	104	95	.....	97	.....	77	92
November.....	83	.....	120	99	.....	98	.....	76	91
December.....	83	.....	112	105	.....	98	.....	74	89
1913.									
January.....	86	.....	99	104	.....	98	.....	74	88
February.....	88	.....	84	105	.....	98	.....	75	87
March.....	91	.....	70	105	.....	98	.....	74	87
April.....	94	.....	67	103	.....	97	.....	74	87
May.....	94	.....	70	91	.....	97	.....	75	87
June.....	93	.....	74	89	.....	97	.....	75	87
July.....	92	.....	80	88	.....	97	.....	75	87
August.....	91	.....	88	90	.....	97	.....	74	88
September.....	91	.....	100	96	.....	98	.....	74	91
October.....	90	.....	111	97	.....	99	.....	74	92
November.....	87	.....	132	98	.....	100	.....	74	92
December.....	88	.....	127	101	.....	100	.....	73	92
1914.									
January.....	90	.....	116	101	.....	100	85	73	92
February.....	94	.....	97	91	.....	100	85	73	92
March.....	95	.....	82	89	.....	99	85	74	91
April.....	98	.....	68	83	.....	98	85	74	91
May.....	96	.....	71	83	.....	98	85	74	92
June.....	93	.....	75	85	.....	97	85	73	92
July.....	93	.....	80	87	.....	97	85	73	92
August.....	94	.....	89	92	.....	98	86	79	93
September.....	93	.....	98	96	.....	98	87	84	97
October.....	91	.....	104	95	.....	99	88	83	97
November.....	87	.....	120	100	.....	99	88	83	96
December.....	85	.....	127	100	.....	99	89	84	95

## RELATIVE RETAIL PRICES OF FOODSTUFFS, BY YEARS, 1907-1916 AND BY MONTHS, JANUARY 1912-SEPTEMBER 1917—Continued.

[Average price for 1916=100.]

Year or month.	Hens.	Salmon, canned.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.
1915.									
January.....	86	98	118	98	90	99	92	92	97
February.....	88	98	90	96	91	98	97	102	98
March.....	90	98	68	91	90	97	97	101	97
April.....	91	98	69	91	90	97	97	102	97
May.....	91	98	70	88	91	96	98	103	97
June.....	89	98	71	88	91	96	98	96	97
July.....	88	98	74	87	90	96	97	93	96
August.....	87	98	81	85	88	97	97	92	96
September.....	88	98	93	85	88	97	96	87	96
October.....	87	98	107	89	89	97	95	84	96
November.....	86	98	122	93	90	98	95	84	95
December.....	86	98	124	98	92	98	95	85	95
1916.									
January.....	92	99	113	97	94	98	95	89	95
February.....	94	99	93	96	96	98	95	93	96
March.....	97	99	76	102	97	97	95	89	95
April.....	100	99	73	105	96	97	95	89	96
May.....	102	99	75	94	96	97	95	89	96
June.....	103	99	80	92	95	97	95	87	96
July.....	102	99	85	90	94	97	95	86	96
August.....	101	100	97	93	95	99	98	100	98
September.....	103	100	110	99	99	100	105	110	100
October.....	103	101	122	106	104	103	111	115	104
November.....	101	103	137	111	113	106	115	129	112
December.....	102	105	141	114	120	110	107	124	116
1917.									
January.....	108	106	145	115	121	109	108	127	118
February.....	113	107	135	119	122	110	109	127	120
March.....	117	110	93	117	125	110	110	130	122
April.....	123	117	103	129	128	112	115	153	137
May.....	124	127	106	118	131	115	130	198	158
June.....	122	130	109	119	131	116	131	183	162
July.....	119	132	112	117	128	122	135	164	174
August.....	118	134	123	121	127	125	140	170	194
September.....	128	137	140	126	130	130	135	166	241

## RELATIVE RETAIL PRICES OF FOODSTUFFS, BY YEARS, 1907-1916 AND BY MONTHS, JANUARY 1912-SEPTEMBER 1917—Continued.

[Average price for 1916=100.]

Year or month.	Rice.	Pota- toes.	Onions.	Beans.	Prunes.	Raisins.	Sugar.	Coffee.	Tea.
1907.....		68					72		
1908.....		72					74		
1909.....		73					73		
1910.....		65					75		
1911.....		84					76		
1912.....		85					79		
1913.....		65					68		
1914.....		70					74		
1915.....	100	57	71	71	101	97	82	100	100
1916.....	100	100	100	100	100	100	100	100	100
1912.									
January.....		94					83		
February.....		98					83		
March.....		105					84		
April.....		117					81		
May.....		110					79		
June.....		109					79		
July.....		82					77		
August.....		72					77		
September.....		61					77		
October.....		58					76		
November.....		58					75		
December.....		58					74		
1913.									
January.....		59					73		
February.....		58					69		
March.....		57					68		
April.....		56					67		
May.....		59					67		
June.....		67					66		
July.....		71					68		
August.....		71					70		
September.....		71					71		
October.....		68					69		
November.....		69					68		
December.....		69					67		
1914.									
January.....		70					65		
February.....		70					64		
March.....		69					64		
April.....		68					62		
May.....		72					62		
June.....		85					64		
July.....		100					65		
August.....		72					98		
September.....		68					99		
October.....		58					90		
November.....		54					77		
December.....		54					75		

## RELATIVE RETAIL PRICES OF FOODSTUFFS, BY YEARS, 1907-1916 AND BY MONTHS, JANUARY 1912-SEPTEMBER 1917—Continued.

[Average price for 1916=100.]

Year or month.	Rice.	Pota- toes.	Onions.	Beans.	Prunes.	Raisins.	Sugar.	Coffee.	Tea.
1915.									
January.....	100	55	69	66	102	97	75	100	100
February.....	100	54	69	69	102	97	80	100	100
March.....	100	53	67	69	102	97	82	100	100
April.....	100	55	74	70	102	97	83	100	100
May.....	100	58	87	69	102	97	85	100	100
June.....	100	64	82	69	101	97	86	100	100
July.....	100	55	72	69	101	97	87	100	100
August.....	100	53	63	69	101	97	84	100	100
September.....	100	51	61	69	101	97	81	100	100
October.....	100	61	67	72	100	97	76	100	100
November.....	99	62	68	77	99	97	81	100	100
December.....	99	69	71	81	99	97	84	100	100
1916.									
January.....	100	88	83	83	99	98	84	100	100
February.....	100	91	90	84	99	98	85	100	100
March.....	100	90	91	84	99	98	93	100	100
April.....	100	89	98	85	99	98	99	100	100
May.....	100	91	104	85	99	98	106	100	100
June.....	100	108	111	88	99	98	108	100	100
July.....	100	87	109	106	100	99	109	100	100
August.....	100	91	102	110	100	99	106	100	100
September.....	100	104	94	110	100	100	96	100	100
October.....	100	106	96	111	101	101	102	100	100
November.....	100	128	105	124	103	106	107	100	100
December.....	100	128	115	130	103	108	104	100	100
1917.									
January.....	100	145	141	132	104	109	100	100	100
February.....	100	188	249	135	105	109	101	100	100
March.....	100	192	255	140	105	109	109	100	100
April.....	104	219	273	152	108	110	120	100	101
May.....	115	227	176	174	114	112	125	101	102
June.....	119	237	142	177	117	113	116	101	104
July.....	116	159	104	177	119	115	114	102	110
August.....	116	133	94	175	121	115	124	102	110
September.....	119	111	94	171	122	115	123	102	112



#### 4.—CHANGE IN AVERAGE PRICES AND IN AMOUNT OF VARIOUS ARTICLES OF FOOD THAT COULD BE BOUGHT FOR ONE DOLLAR, 1890-1917.

To show the changes and results of changes in retail prices of food for a period of 28 years, from 1890 to 1917, inclusive, the table next presented has been prepared from the figures appearing in the reports and bulletins of the United States Bureau of Labor Statistics. It shows the average price of each article and the average amount of each of 15 articles of food that could be bought for \$1, each year of the period, except for two articles—sirloin steak and rib roast—for which satisfactory data were available only for the years 1907-1917. Prices for 1917 are as of November 15th.

An explanation of the method of compiling this table is given in the appendix of Bulletin 197, Bureau of Labor Statistics.

AVERAGE RETAIL PRICES OF FOODS AND AMOUNT PURCHASABLE FOR \$1,  
EACH YEAR, 1890-1917.

Year.	Sirloin steak.		Round steak.		Rib roast.		Pork chops.		Bacon.	
	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.
	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.
1890.....			\$0.123	8.1			\$0.107	9.3	\$0.125	8.0
1891.....			.124	8.1			.109	9.2	.126	7.9
1892.....			.124	8.1			.111	9.0	.129	7.8
1893.....			.124	8.1			.118	8.5	.142	7.0
1894.....			.122	8.2			.112	8.9	.135	7.4
1895.....			.123	8.1			.110	9.1	.130	7.7
1896.....			.124	8.1			.107	9.3	.126	7.9
1897.....			.125	8.0			.108	9.3	.127	7.9
1898.....			.127	7.9			.109	9.2	.131	7.6
1899.....			.129	7.8			.112	8.9	.134	7.5
1900.....			.132	7.6			.119	8.4	.143	7.0
1901.....			.138	7.2			.130	7.7	.158	6.3
1902.....			.147	6.8			.141	7.1	.177	5.6
1903.....			.140	7.1			.140	7.1	.182	5.5
1904.....			.141	7.1			.137	7.3	.180	5.6
1905.....			.140	7.1			.139	7.2	.181	5.5
1906.....			.145	6.9			.152	6.6	.196	5.1
1907.....	\$0.181	5.5	.150	6.7	\$0.150	6.7	.157	6.4	.205	4.9
1908.....	.186	5.4	.157	6.4	.154	6.5	.161	6.2	.210	4.8
1909.....	.194	5.2	.162	6.2	.160	6.3	.175	5.7	.227	4.4
1910.....	.202	5.0	.173	5.8	.166	6.0	.193	5.2	.260	3.8
1911.....	.204	4.9	.173	5.8	.168	6.4	.179	5.6	.251	4.0
1912.....	.230	4.3	.198	5.1	.184	5.0	.193	5.2	.249	4.0
1913.....	.253	4.0	.221	4.5	.198	5.1	.211	4.7	.273	3.7
1914.....	.258	3.9	.234	4.3	.204	4.9	.222	4.5	.279	3.6
1915.....	.255	3.9	.228	4.4	.200	5.0	.203	4.9	.273	3.7
1916.....	.273	3.7	.245	4.1	.212	4.7	.227	4.4	.287	3.5
1917.....	.330	3.3	.309	3.2	.257	3.9	.388	2.6	.482	2.1

AVERAGE RETAIL PRICES OF FOODS AND AMOUNT PURCHASABLE FOR \$1,  
EACH YEAR, 1890-1917—Continued.

Year.	Ham.		Lard.		Hens.		Eggs.		Butter.	
	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.	Average retail price.	Amount bought for \$1.
	Per lb.	Lbs.	Per lb.	Lbs.	Per lb.	Lbs.	Per doz.	Doz.	Per lb.	Lbs.
1890.....	\$0.152	6.6	\$0.093	10.8	\$0.135	7.4	\$0.208	4.8	\$0.255	3.9
1891.....	.153	6.5	.094	10.6	.139	7.2	.221	4.5	.274	3.6
1892.....	.157	6.4	.098	10.2	.138	7.2	.221	4.5	.275	3.6
1893.....	.168	6.0	.112	8.9	.139	7.2	.224	4.5	.283	3.5
1894.....	.157	6.4	.101	9.9	.131	7.6	.199	5.0	.261	3.8
1895.....	.152	6.6	.095	10.5	.131	7.6	.206	4.9	.249	4.0
1896.....	.150	6.7	.088	11.4	.129	7.8	.192	5.2	.238	4.2
1897.....	.151	6.6	.085	11.8	.125	8.0	.189	5.3	.239	4.2
1898.....	.146	6.8	.089	11.2	.129	7.8	.199	5.0	.244	4.1
1899.....	.153	6.5	.092	10.9	.136	7.4	.209	4.8	.251	4.0
1900.....	.162	6.2	.099	10.1	.134	7.5	.207	4.8	.261	3.8
1901.....	.169	5.9	.112	8.9	.137	7.3	.219	4.6	.265	3.8
1902.....	.184	5.4	.127	7.9	.151	6.6	.247	4.0	.287	3.5
1903.....	.187	5.3	.120	8.3	.158	6.3	.259	3.9	.285	3.5
1904.....	.182	5.5	.111	9.0	.161	6.2	.271	3.7	.280	3.6
1905.....	.182	5.5	.110	9.1	.165	6.1	.272	3.7	.290	3.4
1906.....	.196	5.1	.121	8.3	.172	5.8	.278	3.6	.304	3.3
1907.....	.201	5.0	.127	7.9	.175	5.7	.285	3.5	.328	3.0
1908.....	.207	4.8	.127	7.9	.177	5.6	.291	3.4	.331	3.0
1909.....	.217	4.6	.142	7.0	.189	5.3	.315	3.2	.349	2.9
1910.....	.243	4.1	.164	6.1	.200	5.0	.332	3.0	.364	2.7
1911.....	.238	4.2	.141	7.1	.194	5.2	.318	3.1	.339	2.9
1912.....	.240	4.2	.148	6.8	.200	5.0	.335	3.0	.378	2.6
1913.....	.266	3.8	.158	6.3	.214	4.7	.338	3.0	.385	2.6
1914.....	.271	3.7	.157	6.4	.219	4.6	.348	2.9	.364	2.7
1915.....	.258	3.9	.148	6.8	.208	4.8	.335	3.0	.360	2.8
1916.....	.294	3.4	.175	5.7	.236	4.2	.375	2.7	.394	2.5
1917.....	.426	2.3	.371	2.7	.312	3.2	.551	1.8	.508	2.0

	Milk.		Flour.		Corn meal.		Potatoes.		Sugar.	
	Per qt.	Qts.	Pr $\frac{1}{4}$ bbl. bag.	Bags.	Per lb.	Lbs.	Per pk.	Pecks.	Per lb.	Lbs.
1890.....	\$0.068	14.7	\$0.711	1.41	\$0.019	52.6	\$0.247	4.0	\$0.069	14.5
1891.....	.068	14.7	.729	1.37	.021	47.6	.264	3.8	.060	16.7
1892.....	.068	14.7	.681	1.47	.020	50.0	.217	4.6	.056	17.9
1893.....	.068	14.7	.623	1.61	.020	50.0	.254	3.9	.059	16.9
1894.....	.068	14.7	.575	1.74	.019	52.6	.232	4.3	.055	18.2
1895.....	.068	14.7	.577	1.73	.019	52.6	.208	4.8	.053	18.9
1896.....	.068	14.7	.601	1.66	.018	55.6	.174	5.7	.056	17.9
1897.....	.067	14.9	.676	1.48	.018	55.6	.211	4.7	.056	17.9
1898.....	.067	14.9	.696	1.44	.018	55.6	.239	4.2	.059	16.9
1899.....	.067	14.9	.613	1.63	.018	55.6	.218	4.6	.059	16.9
1900.....	.068	14.7	.611	1.64	.019	52.6	.212	4.7	.061	16.4
1901.....	.068	14.7	.612	1.63	.020	50.0	.264	3.8	.060	16.7
1902.....	.070	14.3	.615	1.63	.023	43.5	.265	3.8	.056	17.9
1903.....	.072	13.9	.656	1.52	.023	43.5	.260	3.8	.056	17.9
1904.....	.072	13.9	.777	1.29	.023	43.5	.275	3.6	.059	16.9
1905.....	.072	13.9	.777	1.29	.023	43.5	.249	4.0	.060	16.7
1906.....	.074	13.5	.701	1.43	.023	43.5	.259	3.9	.057	17.5
1907.....	.079	12.7	.763	1.31	.025	40.0	.273	3.7	.058	17.2
1908.....	.081	12.3	.813	1.23	.027	37.0	.286	3.5	.059	16.9
1909.....	.083	12.0	.873	1.15	.027	37.0	.289	3.5	.059	16.9
1910.....	.086	11.6	.863	1.16	.028	35.7	.261	3.8	.060	16.7
1911.....	.086	11.6	.813	1.23	.027	37.0	.337	3.0	.061	16.4
1912.....	.088	11.4	.843	1.19	.026	38.5	.341	2.9	.063	15.9
1913.....	.091	11.0	.803	1.25	.029	34.5	.259	3.9	.055	18.2
1914.....	.091	11.0	.833	1.20	.030	33.3	.280	3.6	.059	16.9
1915.....	.090	11.1	1.003	1.00	.031	32.3	.229	4.4	.066	15.2
1916.....	.091	11.0	1.078	.93	.034	29.4	.405	2.5	.080	12.5
1917 (Nov.)....	.127	7.9	1.715	.58	.070	14.3	.455	2.2	.097	10.3

## 5.—INCREASED COST OF FOODSTUFFS IN THE UNITED STATES SINCE THE BEGINNING OF THE EUROPEAN WAR.

In its Monthly Review for July, 1917, page 93, the Bureau of Labor Statistics published a table showing the increased price of the principal foodstuffs entering into a workingman's budget on July 15, 1913, the year immediately preceding the outbreak of hostilities in Europe, to July 15, 1917. The average price of the year 1916 was taken as equalling 100, and relative increased prices worked out on this basis. The comparative data thus secured together with the comment of the Bureau was as follows:

"Comparing prices on July 15, 1914, just prior to the present war with prices on July 15, 1917, food as a whole advanced 42 per cent. In July, 1917, flour was 125 per cent higher—that is, two and one-fourth times the price in July, 1914. Corn meal was 89 per cent higher, lard was 78 per cent higher, sugar 75 per cent higher, and potatoes and bread each 59 per cent higher."

"A table showing the average and relative prices in July of each year from 1913 to 1917 is given herewith":

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON JULY 15 OF EACH YEAR, 1913-1917.

Article.	Unit.	Average money price July 15.					Relative price July 15. [Average 1916=100]				
		1913	1914	1915	1916	1917	1913	1914	1915	1916	1917
Sirloin steak.....	Lb.....	\$0.265	\$0.270	\$0.265	\$0.287	\$0.327	97	99	97	105	120
Round steak.....	Lb.....	.233	.245	.240	.260	.306	95	100	98	106	125
Rib roast.....	Lb.....	.201	.208	.206	.220	.257	95	98	97	104	121
Chuck roast.....	Lb.....	.....	.175	.167	.179	.219	.....	102	97	104	127
Plate beef.....	Lb.....	.....	.127	.123	.132	.165	.....	99	96	103	129
Pork chops.....	Lb.....	.216	.222	.211	.234	.316	95	98	93	103	139
Bacon.....	Lb.....	.278	.273	.270	.290	.429	97	95	94	101	149
Ham.....	Lb.....	.282	.279	.265	.323	.396	96	95	90	110	135
Lard.....	Lb.....	.159	.154	.145	.208	.274	91	88	83	119	157
Hens.....	Lb.....	.217	.219	.208	.241	.280	92	93	88	102	119
Salmon, canned.....	Lb.....	.....	.....	.198	.200	.266	.....	.....	98	99	132
Eggs, strictly fresh.....	Doz.....	.300	.300	.278	.319	.420	80	80	74	85	112
Butter.....	Lb.....	.347	.343	.343	.355	.459	88	87	87	90	117
Cheese.....	Lb.....	.....	.....	.232	.243	.330	.....	.....	90	94	128
Milk.....	Qt.....	.088	.088	.087	.088	.111	97	97	96	97	122
Bread.....	16-oz. loaf <sup>1</sup>	.....	.055	.063	.062	.088	.....	85	97	95	135
Flour.....	½ bbl. bag.	.809	.787	1.003	.927	1.766	75	73	93	86	164
Corn meal.....	Lb.....	.030	.031	.033	.033	.059	87	92	96	96	174
Rice.....	Lb.....	.....	.....	.091	.091	.106	.....	.....	100	100	116
Potatoes.....	Peck.....	.288	.405	.223	.352	.645	71	100	55	87	159
Onions.....	Lb.....	.....	.....	.035	.053	.051	.....	.....	72	109	104
Beans, navy.....	Lb.....	.....	.....	.076	.117	.195	.....	.....	69	106	177
Prunes.....	Lb.....	.....	.....	.135	.134	.160	.....	.....	101	100	119
Raisins.....	Lb.....	.....	.....	.125	.128	.148	.....	.....	97	99	115
Sugar.....	Lb.....	.054	.052	.070	.087	.091	68	65	87	109	114
Coffee.....	Lb.....	.....	.....	.299	.299	.306	.....	.....	100	100	102
Tea.....	Lb.....	.....	.....	.546	.546	.599	.....	.....	100	100	110
All articles combined.....	.....	.....	.....	.....	.....	.....	88	90	88	97	128

<sup>1</sup>16 ounces, weight of dough.

## 6.—COMPARATIVE RETAIL PRICES IN LEADING CITIES OF THE UNITED STATES, 1913-1917.

The following table affords a basis for the comparison of the average retail prices of 28 principal foodstuffs in 15 of the leading cities of the United States for the period 1913-1917, and in 30 other cities on October 15, 1917. It was prepared by the Bureau of Labor Statistics and published in its Monthly Review for November, 1917.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED  
CITIES FOR OCT. 15, 1913, 1916, AND 1917, AND SEPT. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Atlanta, Ga.				Baltimore, Md.			
		Oct. 15, 1913.	Oct. 15, 1916.	1917		Oct. 15, 1913.	Oct. 15, 1916.	1917	
				Sept. 15.	Oct. 15.			Sept. 15.	Oct. 15.
Sirloin steak.....	Lb.....	\$0.242	\$0.254	\$0.312	\$0.311	\$0.235	\$0.252	\$0.334	\$0.326
Round steak.....	Lb.....	.213	.219	.281	.278	.220	.240	.319	.315
Rib roast.....	Lb.....	.197	.199	.237	.241	.173	.202	.259	.259
Chuck roast.....	Lb.....	.154	.165	.203	.212	.153	.168	.225	.220
Plate beef.....	Lb.....	.111	.111	.154	.157	.....	.138	.171	.169
Pork chops.....	Lb.....	.250	.250	.373	.399	.196	.224	.395	.371
Bacon, sliced.....	Lb.....	.322	.312	.439	.490	.225	.255	.454	.457
Ham, sliced.....	Lb.....	.308	.325	.413	.439	.285	.350	.445	.477
Lard.....	Lb.....	.154	.189	.294	.319	.148	.198	.299	.326
Lamb.....	Lb.....	.202	.244	.324	.316	.180	.240	.326	.333
Hens.....	Lb.....	.208	.225	.288	.337	.208	.257	.315	.321
Salmon, canned.....	Lb.....	.....	.162	.229	.246	.....	.165	.254	.254
Eggs.....	Doz.....	.341	.375	.475	.482	.363	.404	.491	.519
Butter.....	Lb.....	.390	.432	.531	.551	.388	.426	.528	.538
Cheese.....	Lb.....	.....	.291	.341	.355	.....	.270	.350	.360
Milk.....	Qt.....	.106	.123	.150	.159	.087	.088	.117	.117
Bread.....	16oz loaf <sup>1</sup>	.....	.069	.090	.091	.....	.062	.079	.082
Flour.....	Lb.....	.035	.049	.072	.072	.032	.053	.075	.070
Corn meal.....	Lb.....	.027	.028	.061	.059	.026	.029	.063	.064
Rice.....	Lb.....	.....	.079	.104	.108	.....	.098	.110	.112
Potatoes.....	Lb.....	.023	.035	.033	.038	.018	.030	.028	.030
Onions.....	Lb.....	.....	.057	.059	.059	.....	.044	.052	.055
Beans, navy.....	Lb.....	.....	.126	.186	.188	.....	.129	.180	.187
Prunes.....	Lb.....	.....	.133	.176	.179	.....	.128	.164	.165
Raisins.....	Lb.....	.....	.149	.150	.162	.....	.120	.145	.146
Sugar.....	Lb.....	.058	.088	.104	.104	.049	.078	.092	.092
Coffee.....	Lb.....	.....	.282	.285	.294	.....	.235	.279	.277
Tea.....	Lb.....	.....	.617	.753	.796	.....	.550	.638	.634

<sup>1</sup>16 ounces, weight of dough.



## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES FOR OCT. 15, 1913, 1916, AND 1917, AND SEPT. 15, 1917—Continued.

Article.	Unit.	Boston, Mass.				Buffalo, N. Y.			
		Oct. 15, 1913.	Oct. 15, 1916.	1917		Oct. 15, 1913.	Oct. 15, 1916.	1917	
				Sept. 15.	Oct. 15.			Sept. 15.	Oct. 15.
Sirloin steak.....	Lb.....	\$0.350	\$0.427	\$0.464	\$0.442	\$0.223	\$0.252	\$0.318	\$0.315
Round steak.....	Lb.....	.350	.372	.467	.449	.193	.227	.298	.293
Rib roast.....	Lb.....	.256	.268	.327	.315	.165	.187	.251	.247
Chuck roast.....	Lb.....	.180	.208	.273	.269	.150	.167	.218	.220
Plate beef.....	Lb.....	.....	.....	.....	.....	.....	.128	.173	.172
Pork chops.....	Lb.....	.244	.258	.405	.409	.210	.255	.415	.388
Bacon, sliced.....	Lb.....	.254	.270	.439	.458	.....	.255	.433	.461
Ham, sliced.....	Lb.....	.313	.345	.447	.456	.267	.323	.425	.432
Lard.....	Lb.....	.157	.190	.295	.309	.144	.182	.286	.306
Lamb.....	Lb.....	.205	.259	.346	.345	.153	.195	.283	.289
Hens.....	Lb.....	.256	.282	.329	.344	.210	.245	.314	.309
Salmon, canned.....	Lb.....	.....	.197	.294	.294	.....	.176	.263	.275
Eggs.....	Doz.....	.533	.573	.652	.660	.366	.490	.536	.551
Butter.....	Lb.....	.380	.406	.512	.524	.371	.401	.493	.510
Cheese.....	Lb.....	.....	.265	.324	.328	.....	.256	.325	.333
Milk.....	Qt.....	.089	.096	.130	.130	.080	.080	.110	.130
Bread.....	16ozloaf <sup>1</sup>	.....	.064	.085	.081	.....	.064	.086	.089
Flour.....	Lb.....	.036	.055	.078	.075	.030	.049	.069	.065
Corn meal.....	Lb.....	.035	.042	.075	.075	.025	.030	.062	.070
Rice.....	Lb.....	.....	.097	.112	.115	.....	.093	.106	.108
Potatoes.....	Lb.....	.017	.029	.027	.034	.017	.029	.029	.031
Onions.....	Lb.....	.....	.054	.057	.056	.....	.046	.056	.056
Beans, navy.....	Lb.....	.....	.115	.184	.184	.....	.119	.185	.182
Prunes.....	Lb.....	.....	.147	.167	.168	.....	.135	.150	.156
Raisins.....	Lb.....	.....	.127	.150	.150	.....	.107	.130	.137
Sugar.....	Lb.....	.054	.079	.097	.098	.054	.093	.095	.100
Coffee.....	Lb.....	.....	.346	.340	.341	.....	.286	.286	.293
Tea.....	Lb.....	.....	.600	.652	.646	.....	.436	.496	.534

<sup>1</sup>16 ounces, weight of dough.

Article.	Unit.	Chicago, Ill.				Cleveland, Ohio.			
		Oct. 15, 1913.	Oct. 15, 1916.	1917		Oct. 15, 1913.	Oct. 15, 1916.	1917	
				Sept. 15.	Oct. 15.			Sept. 15.	Oct. 15.
Sirloin steak.....	Lb.....	\$0.248	\$0.274	\$0.315	\$0.306	\$0.254	\$0.255	\$0.312	\$0.307
Round steak.....	Lb.....	.216	.235	.281	.273	.229	.232	.291	.288
Rib roast.....	Lb.....	.201	.223	.258	.247	.187	.198	.238	.232
Chuck roast.....	Lb.....	.158	.171	.220	.213	.169	.177	.214	.211
Plate beef.....	Lb.....	.....	.128	.165	.165	.....	.122	.158	.158
Pork chops.....	Lb.....	.210	.233	.374	.358	.230	.250	.415	.387
Bacon, sliced.....	Lb.....	.327	.329	.476	.475	.281	.307	.452	.468
Ham, sliced.....	Lb.....	.320	.359	.439	.439	.....	.....	.421	.436
Lard.....	Lb.....	.150	.184	.283	.299	.164	.198	.302	.318
Lamb.....	Lb.....	.198	.223	.320	.314	.187	.222	.308	.306
Hens.....	Lb.....	.184	.223	.294	.271	.209	.240	.327	.317
Salmon, canned.....	Lb.....	.....	.230	.283	.300	.....	.180	.262	.270
Eggs.....	Doz.....	.333	.383	.465	.469	.427	.507	.542	.570
Butter.....	Lb.....	.354	.394	.484	.487	.392	.437	.516	.530
Cheese.....	Lb.....	.....	.277	.344	.368	.....	.283	.332	.350
Milk.....	Qt.....	.080	.090	.100	.129	.080	.090	.120	.120
Bread.....	16ozloaf <sup>1</sup>	.....	.065	.093	.093	.....	.066	.090	.089
Flour.....	Lb.....	.029	.049	.069	.066	.031	.052	.073	.071
Corn meal.....	Lb.....	.028	.036	.065	.071	.030	.037	.069	.073
Rice.....	Lb.....	.....	.094	.103	.103	.....	.094	.106	.111
Potatoes.....	Lb.....	.017	.027	.027	.028	.019	.033	.029	.032
Onions.....	Lb.....	.....	.047	.039	.048	.....	.049	.049	.050
Beans, navy.....	Lb.....	.....	.125	.183	.186	.....	.131	.186	.191
Prunes.....	Lb.....	.....	.129	.159	.161	.....	.136	.165	.165
Raisins.....	Lb.....	.....	.132	.147	.145	.....	.124	.143	.143
Sugar.....	Lb.....	.052	.074	.091	.088	.055	.083	.098	.097
Coffee.....	Lb.....	.....	.300	.284	.285	.....	.288	.294	.291
Tea.....	Lb.....	.....	.540	.564	.573	.....	.475	.565	.566

<sup>1</sup>16 ounces, weight of dough.



AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES FOR OCT. 15, 1913, 1916, AND 1917, AND SEPT. 15, 1917—Continued.

Article.	Unit.	Denver, Colo.				Detroit, Mich.			
		Oct. 15, 1913.	Oct. 15, 1916.	1917		Oct. 15, 1913.	Oct. 15, 1916.	1917	
				Sept. 15.	Oct. 15.			Sept. 15.	Oct. 15.
Sirloin steak.....	Lb.....	\$0.239	\$0.248	\$0.317	\$0.307	\$0.254	\$0.260	\$0.313	\$0.305
Round steak.....	Lb.....	.214	.219	.283	.285	.208	.222	.283	.275
Rib roast.....	Lb.....	.178	.189	.239	.232	.200	.208	.252	.242
Chuck roast.....	Lb.....	.158	.169	.206	.207	.154	.162	.205	.197
Plate beef.....	Lb.....	.....	.105	.140	.144	.....	.126	.161	.158
Pork chops.....	Lb.....	.208	.229	.399	.402	.216	.242	.403	.369
Bacon, sliced.....	Lb.....	.280	.325	.480	.520	.235	.257	.448	.457
Ham, sliced.....	Lb.....	.317	.338	.464	.463	.270	.230	.425	.436
Lard.....	Lb.....	.161	.200	.310	.329	.165	.188	.303	.314
Lamb.....	Lb.....	.146	.194	.302	.303	.164	.210	.316	.313
Hens.....	Lb.....	.194	.212	.285	.284	.198	.242	.331	.314
Salmon, canned.....	Lb.....	.....	.185	.275	.264	.....	.195	.289	.288
Eggs.....	Doz.....	.371	.438	.493	.503	.356	.448	.511	.532
Butter.....	Lb.....	.390	.395	.494	.495	.370	.407	.497	.502
Cheese.....	Lb.....	.263	.263	.352	.352	.....	.266	.329	.344
Milk.....	Qt.....	.084	.083	.115	.116	.090	.100	.120	.120
Bread.....	16ozloaf <sup>1</sup>	.....	.076	.091	.089	.....	.065	.080	.084
Flour.....	Lb.....	.026	.041	.058	.057	.031	.049	.071	.068
Corn meal.....	Lb.....	.026	.028	.059	.061	.028	.033	.072	.075
Rice.....	Lb.....	.....	.093	.113	.111	.....	.089	.113	.116
Potatoes.....	Lb.....	.014	.026	.025	.023	.016	.030	.028	.029
Onions.....	Lb.....	.....	.034	.039	.039	.....	.046	.048	.049
Beans, navy.....	Lb.....	.....	.113	.091	.185	.....	.128	.190	.194
Prunes.....	Lb.....	.....	.135	.183	.179	.....	.126	.170	.170
Raisins.....	Lb.....	.....	.141	.145	.144	.....	.110	.140	.140
Sugar.....	Lb.....	.054	.083	.095	.089	.054	.081	.099	.104
Coffee.....	Lb.....	.....	.300	.304	.300	.....	.284	.310	.307
Tea.....	Lb.....	.....	.510	.572	.573	.....	.430	.559	.545

<sup>1</sup> 16 ounces, weight of dough.

		Milwaukee, Wis.				New York, N. Y.			
Sirloin steak.....	Lb.....	\$0.236	\$0.243	\$0.300	\$0.293	\$0.261	\$0.283	\$0.368	\$0.356
Round steak.....	Lb.....	.216	.218	.281	.280	.255	.277	.368	.360
Rib roast.....	Lb.....	.188	.194	.240	.238	.216	.231	.298	.298
Chuck roast.....	Lb.....	.164	.166	.219	.217	.160	.176	.235	.236
Plate beef.....	Lb.....	.....	.124	.161	.160	.....	.163	.211	.213
Pork chops.....	Lb.....	.212	.230	.383	.370	.229	.260	.394	.399
Bacon, sliced.....	Lb.....	.286	.299	.452	.472	.257	.275	.440	.464
Ham, sliced.....	Lb.....	.290	.299	.418	.436	<sup>2</sup> .205	<sup>2</sup> .228	<sup>2</sup> .300	<sup>2</sup> .314
Lard.....	Lb.....	.158	.198	.294	.315	.163	.196	.294	.313
Lamb.....	Lb.....	.195	.231	.321	.316	.152	.200	.295	.284
Hens.....	Lb.....	.188	.216	.297	.272	.218	.259	.316	.323
Salmon, canned.....	Lb.....	.....	.213	.266	.277	.....	.238	.332	.334
Eggs.....	Doz.....	.350	.389	.454	.482	.479	.517	.592	.627
Butter.....	Lb.....	.350	.405	.485	.499	.375	.408	.507	.515
Cheese.....	Lb.....	.....	.285	.331	.369	.....	.255	.338	.340
Milk.....	Qt.....	.070	.070	.090	.110	.090	.098	.124	.138
Bread.....	16ozloaf <sup>1</sup>	.....	.075	.093	.089	.....	.068	.088	.088
Flour.....	Lb.....	.030	.052	.073	.069	.032	.053	.079	.078
Corn meal.....	Lb.....	.037	.038	.080	.078	.035	.044	.076	.082
Rice.....	Lb.....	.....	.097	.113	.114	.....	.093	.107	.115
Potatoes.....	Lb.....	.016	.029	.029	.027	.024	.034	.033	.038
Onions.....	Lb.....	.....	.043	.046	.047	.....	.054	.050	.059
Beans, navy.....	Lb.....	.....	.129	.188	.193	.....	.119	.185	.185
Prunes.....	Lb.....	.....	.142	.159	.165	.....	.139	.164	.167
Raisins.....	Lb.....	.....	.132	.150	.148	.....	.125	.145	.146
Sugar.....	Lb.....	.055	.078	.094	.091	.049	.074	.092	.097
Coffee.....	Lb.....	.....	.283	.273	.263	.....	.269	.256	.265
Tea.....	Lb.....	.....	.523	.599	.584	.....	.460	.536	.521

<sup>1</sup> 16 ounces, weight of dough.

<sup>2</sup> Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES FOR OCT. 15, 1913, 1916, AND 1917, AND SEPT. 15, 1917—Continued.

Article.	Unit.	Philadelphia, Pa.				Pittsburgh, Pa.			
		Oct. 15, 1913.	Oct. 15, 1916.	1917		Oct. 15, 1913.	Oct. 15, 1916.	1917	
				Sept. 15.	Oct. 15.			Sept. 15.	Oct. 15.
Sirloin steak	Lb.	\$0.312	\$0.326	\$0.402	\$0.392	\$0.277	\$0.284	\$0.365	\$0.356
Round steak	Lb.	.264	.288	.374	.365	.237	.250	.337	.329
Rib roast	Lb.	.221	.235	.295	.291	.217	.230	.279	.274
Chuck roast	Lb.	.182	.193	.258	.252	.178	.179	.242	.241
Plate beef	Lb.	.....	.126	.171	.174	.....	.120	.170	.171
Pork chops	Lb.	.233	.268	.403	.400	.232	.253	.403	.406
Bacon, sliced	Lb.	.275	.299	.447	.467	.306	.321	.462	.483
Ham, sliced	Lb.	.319	.359	.470	.479	.299	.351	.453	.465
Lard	Lb.	.156	.198	.303	.328	.157	.201	.308	.328
Lamb	Lb.	.191	.231	.335	.331	.200	.246	.353	.363
Hens	Lb.	.231	.271	.327	.344	.255	.287	.371	.378
Salmon, canned	Lb.	.....	.179	.251	.260	.....	.211	.297	.301
Eggs	Doz.	.425	.470	.531	.548	.380	.420	.509	.528
Butter	Lb.	.431	.462	.559	.562	.395	.424	.517	.527
Cheese	Lb.	.....	.273	.355	.361	.....	.279	.338	.357
Milk	Qt.	.080	.085	.110	.110	.088	.098	.125	.125
Bread	16ozloaf <sup>1</sup>	.....	.054	.079	.079	.....	.065	.092	.092
Flour	Lb.	.032	.052	.076	.075	.032	.053	.075	.072
Corn meal	Lb.	.028	.033	.066	.071	.030	.036	.079	.081
Rice	Lb.	.....	.097	.112	.118	.....	.095	.106	.110
Potatoes	Lb.	.023	.030	.035	.038	.019	.030	.030	.032
Onions	Lb.	.....	.050	.054	.056	.....	.054	.050	.052
Beans, navy	Lb.	.....	.112	.182	.185	.....	.132	.184	.188
Prunes	Lb.	.....	.137	.157	.164	.....	.134	.162	.165
Raisins	Lb.	.....	.121	.138	.139	.....	.134	.147	.148
Sugar	Lb.	.050	.075	.091	.094	.057	.084	.099	.101
Coffee	Lb.	.....	.283	.277	.283	.....	.271	.303	.299
Tea	Lb.	.....	.530	.583	.583	.....	.575	.693	.702

<sup>1</sup>16 ounces, weight of dough.

		St. Louis, Mo.				San Francisco, Cal.			
Sirloin steak	Lb.	\$0.260	\$0.258	\$0.308	\$0.308	\$0.214	\$0.203	\$0.230	\$0.236
Round steak	Lb.	.243	.247	.307	.301	.197	.193	.225	.231
Rib roast	Lb.	.195	.203	.253	.256	.213	.207	.226	.232
Chuck roast	Lb.	.156	.165	.214	.206	.152	.133	.159	.162
Plate beef	Lb.	.....	.128	.163	.166	.....	.129	.154	.157
Pork chops	Lb.	.197	.222	.382	.374	.242	.237	.335	.363
Bacon, sliced	Lb.	.269	.278	.463	.486	.344	.350	.470	.519
Ham, sliced	Lb.	.273	.288	.439	.456	.340	.333	.456	.475
Lard	Lb.	.131	.183	.291	.293	.180	.191	.290	.302
Lamb	Lb.	.183	.218	.296	.308	.167	.201	.274	.306
Hens	Lb.	.168	.203	.271	.275	.245	.273	.291	.315
Salmon, canned	Lb.	.....	.168	.277	.284	.....	.179	.245	.249
Eggs	Doz.	.310	.365	.459	.460	.564	.558	.538	.608
Butter	Lb.	.379	.420	.509	.526	.400	.404	.530	.545
Cheese	Lb.	.....	.256	.340	.369	.....	.238	.316	.316
Milk	Qt.	.088	.080	.110	.132	.100	.100	.121	.121
Bread	16ozloaf <sup>1</sup>	.....	.067	.094	.093	.....	.058	.083	.083
Flour	Lb.	.029	.048	.066	.063	.034	.045	.068	.064
Corn meal	Lb.	.025	.033	.065	.066	.035	.038	.071	.074
Rice	Lb.	.....	.086	.100	.106	.....	.085	.102	.105
Potatoes	Lb.	.019	.029	.028	.029	.018	.025	.032	.031
Onions	Lb.	.....	.045	.043	.047	.....	.036	.026	.032
Beans, navy	Lb.	.....	.121	.191	.192	.....	.121	.180	.177
Prunes	Lb.	.....	.130	.169	.173	.....	.124	.146	.152
Raisins	Lb.	.....	.139	.170	.167	.....	.110	.143	.143
Sugar	Lb.	.053	.079	.093	.089	.054	.075	.089	.082
Coffee	Lb.	.....	.242	.280	.283	.....	.317	.304	.303
Tea	Lb.	.....	.543	.617	.628	.....	.517	.540	.534

<sup>1</sup>16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 15 SELECTED CITIES FOR OCT. 15, 1913, 1916, AND 1917, AND SEPT. 15, 1917—Concluded.

Article.	Unit.	Seattle, Wash.			
		Oct. 15, 1913.	Oct. 15, 1916.	1917	
				Sept. 15.	Oct. 15.
Sirloin steak.....	Lb.....	\$0.243	\$0.224	\$0.264	\$0.267
Round steak.....	Lb.....	.207	.200	.250	.251
Rib roast.....	Lb.....	.193	.186	.218	.225
Chuck roast.....	Lb.....	.160	.133	.178	.181
Plate beef.....	Lb.....	.....	.109	.150	.153
Pork chops.....	Lb.....	.243	.236	.401	.400
Bacon, sliced.....	Lb.....	.325	.320	.494	.490
Ham, sliced.....	Lb.....	.300	.310	.410	.431
Lard.....	Lb.....	.171	.184	.285	.301
Lamb.....	Lb.....	.177	.210	.269	.287
Hens.....	Lb.....	.243	.210	.262	.271
Salmon, canned.....	Lb.....	.....	.188	.269	.277
Eggs.....	Doz.....	.500	.531	.528	.652
Butter.....	Lb.....	.400	.428	.530	.546
Cheese.....	Lb.....	.....	.244	.308	.312
Milk.....	Qt.....	.097	.098	.120	.120
Bread.....	16ozloaf <sup>1</sup>	.....	.....	.092	.092
Flour.....	Lb.....	.029	.041	.065	.060
Corn meal.....	Lb.....	.033	.038	.075	.075
Rice.....	Lb.....	.....	.084	.104	.109
Potatoes.....	Lb.....	.014	.018	.024	.023
Onions.....	Lb.....	.....	.038	.031	.040
Beans, navy.....	Lb.....	.....	.113	.191	.190
Prunes.....	Lb.....	.....	.131	.147	.146
Raisins.....	Lb.....	.....	.131	.145	.145
Sugar.....	Lb.....	.064	.085	.095	.089
Coffee.....	Lb.....	.....	.326	.313	.316
Tea.....	Lb.....	.....	.500	.533	.542

<sup>1</sup>16 ounces, weight of dough.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 30 CITIES FOR OCT. 15, 1917.

[The average prices shown below are computed from reports sent monthly to the bureau by retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Article.	Unit.	Bir- ming- ham, Ala.	Bridge- port, Conn.	Butte, Mont.	Charles- ton, S. C.	Cin- cin- nati, Ohio.	Co- lum- bus, Ohio.	Dallas, Tex.
Sirloin steak.....	Lb.....	\$0.355	\$0.428	\$0.300	\$0.277	\$0.274	\$0.329	\$0.311
Round steak.....	Lb.....	.314	.395	.272	.258	.261	.303	.300
Rib Roast.....	Lb.....	.266	.333	.243	.247	.229	.258	.261
Chuck roast.....	Lb.....	.212	.272	.200	.191	.189	.226	.230
Plate beef.....	Lb.....	.170	.172	.135	.150	.153	.176	.185
Pork chops.....	Lb.....	.389	.391	.403	.392	.371	.386	.386
Bacon, sliced.....	Lb.....	.509	.509	.560	.471	.467	.472	.535
Ham, sliced.....	Lb.....	.450	.503	.480	.441	.425	.447	.483
Lard.....	Lb.....	.308	.301	.311	.308	.306	.325	.298
Lamb.....	Lb.....	.433	.315	.326	.339	.284	.300	.358
Hens.....	Lb.....	.286	.355	.333	.343	.325	.301	.272
Salmon, canned.....	Lb.....	.278	.350	.355	.266	.259	.281	.277
Eggs.....	Doz.....	.494	.706	.693	.507	.464	.475	.480
Butter.....	Lb.....	.560	.504	.559	.534	.515	.499	.500
Cheese.....	Lb.....	.356	.341	.350	.345	.363	.338	.383
Milk.....	Qt.....	.152	.140	.150	.160	.120	.110	.148
Bread.....	16ozloaf <sup>1</sup>	.094	.093	.104	.091	.081	.087	.088
Flour.....	Lb.....	.072	.075	.078	.078	.124	.071	.068
Corn meal.....	Lb.....	.054	.085	.073	.069	.066	.069	.069
Rice.....	Lb.....	.122	.119	.132	.094	.117	.111	.111
Potatoes.....	Lb.....	.037	.034	.020	.036	.031	.030	.037
Onions.....	Lb.....	.058	.060	.046	.051	.046	.054	.048
Beans, navy.....	Lb.....	.197	.185	.195	.161	.190	.191	.178
Prunes.....	Lb.....	.160	.165	.173	.168	.162	.168	.183
Raisins.....	Lb.....	.160	.157	.153	.149	.144	.149	.150
Sugar.....	Lb.....	.102	.101	.107	.096	.096	.104	.101
Coffee.....	Lb.....	.328	.319	.416	.288	.274	.290	.336
Tea.....	Lb.....	.740	.623	.755	.664	.683	.704	.823

<sup>1</sup>16 ounces, weight of dough.



AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 30 CITIES  
FOR OCT. 15, 1917—Continued

Article.	Unit.	Fall River, Mass.	Indi- anap- olis, Ind.	Jack- son- ville, Fla.	Kansas City, Mo.	Little Rock, Ark.	Los- An- geles, Cal.	Louis- ville, Ky.
Sirloin steak.....	Lb.....	\$0.427	\$0.329	\$0.323	\$0.317	\$0.306	\$0.277	\$0.285
Round steak.....	Lb.....	.367	.325	.293	.292	.278	.247	.271
Rib roast.....	Lb.....	.293	.236	.253	.235	.255	.229	.232
Chuck roast.....	Lb.....	.251	.218	.199	.198	.197	.186	.203
Plate beef.....	Lb.....	.....	.165	.154	.165	.168	.152	.175
Pork chops.....	Lb.....	.386	.404	.397	.382	.381	.372	.365
Bacon, sliced.....	Lb.....	.434	.488	.484	.477	.513	.546	.523
Ham, sliced.....	Lb.....	.436	.446	.420	.433	.463	.513	.438
Lard.....	Lb.....	.294	.318	.301	.323	.335	.301	.320
Lamb.....	Lb.....	.342	.250	.300	.270	.308	.288	.310
Hens.....	Lb.....	.327	.278	.316	.265	.297	.319	.297
Salmon, canned.....	Lb.....	.282	.238	.278	.296	.298	.268	.253
Eggs.....	Doz.....	.692	.461	.545	.449	.485	.610	.473
Butter.....	Lb.....	.499	.517	.531	.502	.544	.535	.539
Cheese.....	Lb.....	.324	.387	.349	.350	.375	.339	.382
Milk.....	Qt.....	.130	.100	.137	.122	.167	.120	.120
Bread.....	16ozloaf <sup>1</sup>	.085	.085	.093	.096	.089	.082	.100
Flour.....	Lb.....	.077	.073	.076	.066	.073	.065	.071
Corn meal.....	Lb.....	.074	.059	.066	.062	.065	.078	.059
Rice.....	Lb.....	.117	.121	.106	.105	.103	.104	.112
Potatoes.....	Lb.....	.031	.031	.040	.031	.035	.032	.048
Onions.....	Lb.....	.053	.052	.054	.046	.054	.033	.042
Beans, navy.....	Lb.....	.173	.203	.197	.195	.199	.179	.196
Prunes.....	Lb.....	.165	.178	.181	.159	.178	.158	.161
Raisins.....	Lb.....	.145	.168	.178	.152	.151	.152	.167
Sugar.....	Lb.....	.100	.102	.100	.095	.095	.084	.102
Coffee.....	Lb.....	.323	.295	.326	.288	.330	.318	.279
Tea.....	Lb.....	.487	.743	.735	.608	.803	.590	.733

<sup>1</sup>16 ounces, weight of dough.

Article.	Unit.	Man- ches- ter, N. H.	Mem- phis, Tenn.	Minne- apolis, Minn.	New- ark, N. J.	New Hav- en, Conn.	New Or- leans, La.	Oma- ha, Nebr.	Port- land, Oreg.
Sirloin steak..	Lb.....	\$0.448	\$0.307	\$0.256	\$0.378	\$0.437	\$0.271	\$0.319	\$0.255
Round steak..	Lb.....	.409	.280	.245	.382	.399	.246	.295	.246
Rib roast.....	Lb.....	.277	.246	.209	.297	.323	.233	.232	.236
Chuck roast..	Lb.....	.248	.210	.181	.254	.287	.183	.203	.183
Plate beef.....	Lb.....	.....	.173	.136	.188	.....	.155	.154	.147
Pork chops.....	Lb.....	.393	.389	.356	.410	.401	.401	.378	.373
Bacon, sliced..	Lb.....	.455	.495	.486	.455	.498	.503	.465	.510
Ham, sliced.....	Lb.....	.419	.432	.436	<sup>2</sup> .333	.505	.425	.438	.445
Lard.....	Lb.....	.317	.301	.304	.317	.313	.301	.318	.310
Lamb.....	Lb.....	.330	.353	.248	.345	.345	.314	.332	.275
Hens.....	Lb.....	.348	.301	.247	.348	.363	.327	.265	.248
Salmon, canned	Lb.....	.294	.277	.316	.329	.322	.304	.282	.325
Eggs.....	Doz.....	.640	.448	.441	.674	.733	.469	.453	.600
Butter.....	Lb.....	.552	.508	.475	.538	.516	.519	.496	.543
Cheese.....	Lb.....	.332	.351	.332	.361	.336	.350	.363	.341
Milk.....	Qt.....	.123	.146	.120	.140	.128	.130	.120	.112
Bread.....	16ozloaf <sup>1</sup>	.082	.096	.092	.082	.089	.077	.096	.086
Flour.....	Lb.....	.076	.070	.061	.075	.076	.079	.062	.059
Corn meal.....	Lb.....	.077	.060	.063	.084	.075	.072	.065	.073
Rice.....	Lb.....	.104	.102	.103	.111	.114	.100	.107	.108
Potatoes.....	Lb.....	.032	.031	.025	.037	.034	.041	.026	.024
Onions.....	Lb.....	.052	.046	.038	.059	.053	.045	.045	.042
Beans, navy.....	Lb.....	.187	.194	.188	.183	.184	.176	.198	.180
Prunes.....	Lb.....	.155	.166	.159	.165	.170	.177	.166	.138
Raisins.....	Lb.....	.150	.153	.145	.146	.148	.160	.163	.140
Sugar.....	Lb.....	.102	.099	.091	.096	.100	.099	.092	.089
Coffee.....	Lb.....	.335	.305	.313	.304	.337	.269	.314	.320
Tea.....	Lb.....	.585	.709	.489	.564	.535	.625	.604	.540

<sup>1</sup>16 ounces, weight of dough.

<sup>2</sup>Whole.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR 30 CITIES  
FOR OCT. 15, 1917—Concluded.

Article.	Unit	Provi- dence, R. I.	Rich- mond, Va.	Roch- ester, N. Y.	St. Paul, Minn.	Salt Lake City, Utah.	Scranton, Pa.	Spring- field, Ill.	Wash- ington, D. C.
Sirloin steak...	Lb....	\$0.524	\$0.325	\$0.314	\$0.293	\$0.275	\$0.341	\$0.344	\$0.350
Round steak...	Lb....	.435	.305	.298	.258	.259	.305	.328	.337
Rib roast.....	Lb....	.333	.260	.257	.234	.234	.275	.240	.278
Chuck roast....	Lb....	.301	.227	.238	.199	.199	.232	.226	.243
Plate beef.....	Lb....	.....	.187	.182	.142	.159	.166	.183	.191
Pork chops....	Lb....	.425	.378	.398	.370	.414	.386	.394	.415
Bacon, sliced...	Lb....	.467	.480	.456	.473	.483	.464	.504	.497
Ham, sliced....	Lb....	.506	.351	.428	.439	.423	.429	.441	.438
Lard.....	Lb....	.313	.322	.323	.300	.336	.303	.321	.318
Lamb.....	Lb....	.357	.320	.306	.247	.290	.344	.369	.360
Hens.....	Lb....	.363	.308	.342	.255	.321	.344	.240	.325
Salmon, canned	Lb....	.289	.226	.294	.276	.283	.281	.262	.236
Eggs.....	Doz.	.663	.496	.638	.436	.573	.592	.497	.546
Butter.....	Lb....	.541	.559	.515	.477	.550	.507	.525	.534
Cheese.....	Lb....	.337	.357	.346	.337	.341	.331	.381	.351
Milk.....	Qt.	.130	.133	.127	.120	.111	.123	.118	.140
Bread.....	16-oz. <sup>1</sup>	.090	.084	.089	.081	.090	.093	.099	.090
Flour.....	Lb....	.073	.073	.072	.062	.055	.076	.071	.075
Corn meal.....	Lb....	.073	.062	.076	.066	.075	.....	.071	.062
Rice.....	Lb....	.115	.114	.113	.106	.104	.109	.121	.115
Potatoes.....	Lb....	.035	.036	.029	.024	.020	.032	.031	.031
Onions.....	Lb....	.052	.059	.049	.038	.034	.053	.048	.054
Beans, navy...	Lb....	.184	.199	.183	.206	.206	.191	.207	.201
Prunes.....	Lb....	.173	.147	.187	.153	.162	.165	.172	.178
Raisins.....	Lb....	.146	.145	.147	.144	.146	.139	.172	.154
Sugar.....	Lb....	.099	.099	.097	.092	.093	.098	.103	.094
Coffee.....	Lb....	.341	.291	.295	.321	.350	.319	.300	.281
Tea.....	Lb....	.565	.682	.503	.536	.631	.561	.658	.592

<sup>1</sup> 16 ounces, weight of dough. <sup>2</sup>Whole.

## 7.—RETAIL PRICES OF DRY GOODS.

The Bureau of Labor Statistics has also recently begun the collection of data as to the prices of dry goods. The table below shows the average retail price for 8 articles of dry goods in 45 cities in the United States on May 15, and October 15, 1917.

AVERAGE RETAIL PRICES OF 8 ARTICLES OF DRY GOODS IN 45 CITIES, MAY 15, 1917,  
AND OCTOBER 15, 1917, BY ARTICLES.

Article.	Unit.	Atlanta, Ga.		Baltimore, Md.		Birmingham, Ala.		Boston, Mass.		Bridgeport, Conn.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.100	\$0.108	\$0.098	\$0.130	\$0.094	\$0.121	\$0.100	\$0.118	\$0.107	\$0.117
Percalé.....	Per yard	.158	.243	.190	.230	.190	.258	.177	.190	.170	.190
Gingham, apron.	Per yard	.131	.185	.122	.190	.138	.150	.125	.190	.123	.143
Gingham, dress.	Per yard	.146	.196	.160	.240	.162	.228	.166	.210	.163	.215
Muslin, bleached	Per yard	.146	.203	.152	.214	.146	.187	.157	.223	.158	.186
Sheeting, bleached	Per yard	.423	.529	.430	.550	.385	.450	.465	.518	.443	.605
Sheets, bleached.	Per sheet	1.068	1.362	1.058	1.342	.960	1.170	1.242	1.358	1.140	1.370
Outing flannel...	Per yard	.142	.186	.157	.223	.158	.170	.160	.193	.125	.170



AVERAGE RETAIL PRICES OF 8 ARTICLES OF DRY GOODS IN 45 CITIES, MAY 15, 1917  
AND OCTOBER 15, 1917, BY ARTICLES.

Article.	Unit.	Buffalo, N. Y.		Butte, Mont.		Charleston, S. C.		Chicago, Ill.		Cincinnati, Ohio.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.102	\$0.134	\$0.100	\$0.108	\$0.113	\$0.144	\$0.100	\$0.125	\$0.098	\$0.120
Percale.....	Per yard	.190	.235	.197	.233	.178	.223	.195	.250	.170	.250
Gingham, apron..	Per yard	.130	.168	.100	.125	.116	.156	.125	.140	.125	.175
Gingham, dress..	Per yard	.170	.201	.187	.221	.154	.203	.186	.216	.165	.202
Muslin, bleached.	Per yard	.164	.230	.158	.188	.142	.215	.151	.213	.137	.179
Sheeting, bleached	Per yard	.470	.588	.479	.533	.411	.561	.439	.607	.398	.508
Sheets, bleached..	Per sheet	1.279	1.539	1.483	1.717	1.197	1.464	1.218	1.600	1.063	1.288
Outing flannel...	Per yard	.162	.198	.173	.190	.148	.217	.174	.205	.150	.172

		Cleveland, Ohio.		Columbus, Ohio.		Dallas, Tex.		Denver, Colo.		Detroit, Mich.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.090	\$0.108	\$0.110	\$0.118	\$0.098	\$0.125	\$0.100	\$0.122	\$0.101	\$0.143
Percale.....	Per yard	.168	.210	.185	.219	.159	.198	.200	.225	.193	.225
Gingham, apron..	Per yard	.117	.142	.125	.150	.119	.158	.117	.175	.130	.160
Gingham, dress..	Per yard	.157	.197	.215	.300	.150	.200	.180	.255	.198	.238
Muslin, bleached.	Per yard	.158	.185	.170	.213	.140	.191	.167	.233	.180	.231
Sheeting, bleached	Per yard	.486	.564	.456	.590	.391	.473	.496	.621	.471	.594
Sheets, bleached..	Per sheet	1.190	1.476	1.214	1.450	.981	1.173	1.461	1.732	1.320	1.608
Outing flannel...	Per yard	.146	.180	.164	.194	.150	.210	.188	.206	.159	.198

		Fall River, Mass.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.		Little Rock, Ark.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.090	\$0.090	\$0.102	\$0.121	\$0.125	\$0.150	\$0.100	\$0.125	\$0.100	\$0.125
Percale.....	Per yard	.163	.177	.183	.200	.200	.250	.178	.235	.185	.225
Gingham, apron..	Per yard	.120	.150	.124	.150	.150	.190	.133	.187	.125	.163
Gingham, dress..	Per yard	.150	.177	.188	.209	.180	.200	.166	.216	.158	.193
Muslin, bleached.	Per yard	.150	.220	.147	.193	.173	.238	.160	.211	.157	.204
Sheeting, bleached	Per yard	.440	.545	.441	.564	.460	.525	.441	.553	.450	.528
Sheets, bleached..	Per sheet	1.183	1.413	1.070	1.319	1.145	1.375	1.150	1.400	1.108	1.340
Outing flannel...	Per yard	.145	.207	.149	.180	.150	.190	.158	.185	.150	.190

		Los Angeles, Cal.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.		Milwaukee, Wis.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.098	\$0.119	\$0.093	\$0.127	\$0.117	\$0.122	\$0.099	\$0.120	\$0.100	\$0.116
Percale.....	Per yard	.194	.231	.181	.217	.163	.190	.200	.220	.180	.207
Gingham, apron..	Per yard	.138	.171	.123	.188	.125	.125	.133	.150	.124	.150
Gingham, dress..	Per yard	.190	.248	.161	.234	.159	.213	.167	.238	.177	.207
Muslin, bleached.	Per yard	.159	.213	.148	.194	.160	.230	.146	.204	.155	.175
Sheeting, bleached	Per yard	.455	.598	.400	.482	.469	.581	.466	.563	.434	.572
Sheets, bleached..	Per sheet	1.275	1.590	1.147	1.348	1.293	1.530	1.181	1.411	1.367	1.604
Outing flannel...	Per yard	.161	.190	.156	.208	.142	.204	.168	.178	.160	.200

AVERAGE RETAIL PRICES OF 8 ARTICLES OF DRY GOODS IN 45 CITIES, MAY 15, 1917,  
AND OCTOBER 15, 1917, BY ARTICLES—Concluded.

Article.	Unit.	Minneapolis, Minn.		Newark, N. J.		New Haven, Conn.		New Orleans, La.		New York, N. Y.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.107	\$0.127	\$0.095	\$0.125	\$0.097	\$0.131	\$0.100	\$0.150	\$0.109	\$0.139
Percalé.....	Per yard	.187	.240	.183	.235	.177	.218	.150	.220	.180	.208
Gingham, apron..	Per yard	.129	.161	.117	.150	.125	.161	.117	.163	.117	.154
Gingham, dress..	Per yard	.194	.246	.179	.244	.167	.212	.150	.197	.168	.216
Muslin, bleached.	Per yard	.149	.202	.149	.213	.150	.210	.125	.183	.152	.213
Sheeting, bleached.	Per yard	.427	.523	.450	.546	.417	.501	.....	.....	.428	.569
Sheets, bleached.	Per sheet	1.142	1.406	1.150	1.370	1.120	1.340	.900	1.150	1.112	1.392
Outing flannel...	Per yard	.155	.189	.154	.191	.151	.173	.....	.....	.170	.188

		Omaha, Nebr.		Philadelphia, Pa.		Pittsburgh, Pa.		Portland, Oreg.		Providence, R. I.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.095	\$0.134	\$0.125	\$0.133	\$0.100	\$0.119	\$0.094	\$0.127	\$0.098	\$0.130
Percalé.....	Per yard	.175	.250	.197	.235	.187	.223	.175	.228	.176	.188
Gingham, apron..	Per yard	.113	.168	.119	.171	.113	.166	.108	.147	.133	.170
Gingham, dress..	Per yard	.150	.205	.162	.202	.165	.215	.147	.196	.160	.188
Muslin, bleached.	Per yard	.140	.187	.157	.213	.159	.201	.143	.200	.152	.217
Sheeting, bleached.	Per yard	.406	.530	.454	.553	.447	.578	.450	.542	.418	.498
Sheets, bleached.	Per sheet	1.100	1.342	1.206	1.443	1.147	1.412	1.213	1.467	1.105	1.422
Outing flannel...	Per yard	.144	.189	.149	.182	.153	.193	.167	.176	.....	.....

		Richmond, Va.		Rochester, N. Y.		St. Louis, Mo.		St. Paul, Minn.		Salt Lake City, Utah.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	\$0.105	\$0.131	\$0.086	\$0.095	\$0.103	\$0.141	\$0.087	\$0.108	\$0.110	\$0.142
Percalé.....	Per yard	.171	.221	.158	.200	.190	.250	.175	.210	.200	.238
Gingham, apron..	Per yard	.122	.168	.115	.150	.125	.150	.115	.147	.125	.167
Gingham, dress..	Per yard	.157	.234	.191	.223	.170	.245	.147	.172	.173	.234
Muslin, bleached.	Per yard	.169	.222	.144	.201	.142	.193	.169	.208	.149	.203
Sheeting, bleached.	Per yard	.446	.581	.424	.508	.554	.540	.386	.474	.442	.571
Sheets, bleached.	Per sheet	1.107	1.392	1.167	1.387	1.090	1.318	1.078	1.370	1.363	1.638
Outing flannel...	Per yard	.148	.184	.156	.200	.156	.195	.142	.170	.168	.216

		San Fran- cisco, Cal.		Scranton, Pa.		Seattle, Wash.		Springfield, Ill.		Washington, D. C.	
		May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917	May 15, 1917	Oct. 15, 1917
Calico.....	Per yard	.....	.....	\$0.088	\$0.125	\$0.103	\$0.150	\$0.100	\$0.125	\$0.102	\$0.130
Percalé.....	Per yard	\$0.208	\$0.250	.190	.220	.200	.250	.....	.....	.178	.217
Gingham, apron..	Per yard	.125	.193	.110	.158	.125	.190	.125	.165	.134	.192
Gingham, dress..	Per yard	.163	.214	.151	.185	.164	.219	.146	.207	.194	.257
Muslin, bleached.	Per yard	.161	.230	.145	.198	.170	.209	.146	.190	.154	.219
Sheeting, bleached.	Per yard	.493	.626	.422	.546	.526	.626	.448	.520	.461	.601
Sheets, bleached.	Per sheet	1.270	1.540	1.070	1.320	1.313	1.538	1.225	1.625	1.138	1.563
Outing flannel...	Per yard	.162	.213	.150	.190	.170	.214	.142	.173	.168	.198

## 8.—RELATION BETWEEN CHANGES IN WHOLESALE AND RETAIL PRICES, 1913-1917.

The December, 1917, issue of the Monthly Review of the United States Bureau of Labor Statistics, contains a very significant tabulation which shows the relation in variations between wholesale and retail prices. It is apparent from this table, that fluctuations between retail and wholesale prices conformed quite closely to each other up to October, 1913. Since that date the margin between retail and wholesale prices has widened quite materially.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES, OCTOBER, 1913 TO 1916, AND JANUARY, APRIL, JULY, AUGUST, SEPTEMBER, AND OCTOBER, 1917.

[The initials W=wholesale; R=retail.]

Article and city.	Unit.	October.				1917					
		1913	1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.	Oct.
Bacon, short clear sides, Chicago.....	W Lb.	\$0.129	\$0.137	\$0.113	\$0.162	\$0.158	\$0.218	\$0.247	\$0.261	\$0.274	\$0.318
Bacon, sliced, Chicago....	R Lb.	.327	.334	.314	.329	.316	.395	.439	.429	.476	.475
Beans, medium, choice, New York.....	W Lb.	.038	.047	.059	.088	.108	.130	.154	.150	.135	.138
Beans, navy, small, white, New York.....	R Lb.	.....	.....	.087	.119	.149	.162	.188	.189	.185	.185
Beef:											
Fresh, carcass, Chicago	W Lb.	.130	.144	.138	.138	.138	.160	.163	.168	.190	.190
Round steak, Chicago	R Lb.	.216	.238	.254	.235	.227	.256	.266	.273	.281	.273
Fresh, sides, New York	W Lb.	.130	.135	.128	.130	.133	.173	.163	.170	.185	.183
Rib roast, bone in, New York.....	R Lb.	.216	.222	.226	.231	.238	.270	.279	.286	.298	.298
Butter, creamery, extra, Chicago.....	W Lb.	.290	.295	.275	.345	.370	.440	.375	.394	.425	.435
Butter, creamery, extra, Chicago.....	R Lb.	.354	.340	.324	.394	.438	.484	.432	.448	.484	.487
Butter, creamery, extra, New York.....	W Lb.	.308	.310	.291	.350	.395	.450	.395	.408	.444	.443
Butter, creamery, extra, New York.....	R Lb.	.375	.372	.339	.408	.460	.513	.453	.470	.507	.515
Butter, creamery, extra, San Francisco.....	W Lb.	.335	.305	.270	.340	.355	.390	.385	.435	.435	.460

<sup>1</sup>Wholesale prices of fancy patent flour at St. Louis for the months shown in the November issue of the Monthly Review and not in the present issue are as follows: September, 1913, \$4.300; September, 1914, \$5.324; September, 1915, \$5.200; September, 1916, \$7.300.



## WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES, ETC.—Concluded.

Article and city	Unit.	October.				1917					
		1913	1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.	Oct.
Butter, creamery, extra, San Francisco.....R	Lb.	\$0.400	\$0.379	\$0.342	\$0.404	\$0.425	\$0.452	\$0.455	\$0.504	\$0.530	\$0.545
Cheese, whole milk, American twins, Chicago....W	Lb.	.153	.128	.140	.186	.218	.223	.216	.215	.240	.246
Cheese, full cream, American, Chicago.....R	Lb.	.....	.....	.230	.277	.321	.327	.339	.342	.344	.368
Cheese, whole milk, State, New York.....W	Lb.	.161	.145	.148	.208	.220	.245	.238	.229	.244	.255
Cheese, full cream, American, New York.....R	Lb.	.....	.....	.234	.255	.301	.335	.328	.331	.338	.340
Cheese, fancy, California flats, San Francisco....W	Lb.	.165	.130	.165	.165	.180	.215	.200	.235	.235	.220
Cheese, full cream, American, San Francisco....R	Lb.	.....	.....	.226	.238	.242	.297	.297	.306	.316	.316
Eggs, fresh, firsts, Chicago.....W	Doz.	.255	.220	.253	.308	.485	.305	.310	.323	.385	.370
Eggs, strictly fresh, Chicago.....R	Doz.	.333	.301	.340	.383	.525	.376	.406	.428	.465	.469
Eggs, fresh, firsts, New York.....W	Doz.	.290	.250	.300	.345	.505	.330	.350	.380	.413	.400
Eggs, strictly fresh, New York.....R	Doz.	.479	.421	.456	.517	.667	.424	.477	.544	.592	.627
Eggs, fresh, extra, pullets, San Francisco.....W	Doz.	.350	.335	.385	.435	.380	.280	.320	.370	.430	.435
Eggs, strictly fresh, San Francisco.....R	Doz.	.564	.533	.542	.558	.480	.374	.392	.475	.538	.608
Flour, winter patents, Kansas City.....W	Bbl.	4.075	5.075	5.050	7.550	8.950	11.450	11.150	12.900	10.700	10.500
Flour, Aristos, Kansas City.....R	Bbl.	5.900	6.534	7.300	9.700	10.600	13.689	13.680	14.320	13.289	13.066
Flour, standard patents, Minneapolis.....W	Bbl.	4.450	5.750	5.550	8.850	9.450	11.025	12.000	13.200	11.350	10.550
Flour, Pillsbury's Best, Minneapolis.....R	Bbl.	5.600	7.000	6.400	10.000	10.800	13.200	13.424	14.336	12.208	11.984
Flour, fancy patents, St. Louis.....W	Bbl.	4.150	5.075	5.325	7.600	8.675	11.375	11.375	12.875	10.800	11.250
Flour, Gold Medal, St. Louis.....R	Bbl.	6.200	7.400	6.880	9.667	10.587	12.853	13.200	14.800	13.700	13.100
Ham, Smoked, Chicago..W	Lb.	.164	.173	.163	.193	.188	.243	.243	.233	.263	.283
Ham, smoked, sliced, Chicago.....R	Lb.	.320	.346	.328	.359	.333	.382	.414	.407	.439	.439
Lamb, dressed, round, Chicago.....W	Lb.	.135	.135	.155	.170	.200	.220	.260	.230	.280	.270
Lamb, leg of, yearling, Chicago.....R	Lb.	.198	.204	.204	.223	.232	.263	.287	.288	.320	.314
Lard, prime, contract, New York.....W	Lb.	.107	.102	.100	.152	.159	.215	.201	.226	.240	.246
Lard, pure, tub, New York.....R	Lb.	.163	.159	.150	.196	.213	.263	.274	.275	.294	.313
Meal, corn, fine, yellow, New York.....W	Lb.	.016	.019	.017	.021	.027	.031	.040	.052	.050	.049
Meal, corn, New York...R	Lb.	.035	.036	.035	.044	.051	.057	.070	.067	.076	.082
Milk, fresh, Chicago....W	Qt.	.040	.043	.039	.045	.045	.054	.047	.051	.051	.074
Milk, fresh, bottled, delivered, Chicago.....R	Qt.	.080	.080	.080	.090	.100	.100	.100	.100	.100	.129
Milk, fresh, New York..W	Qt.	.040	.040	.038	.050	.051	.049	.050	.060	.060	.072
Milk, fresh, bottled, delivered, New York.....R	Qt.	.090	.090	.090	.098	.100	.109	.114	.125	.124	.138
Milk, fresh, San Francisco W	Qt.	.039	.039	.038	.038	.038	.038	.043	.043	.058	.059
Milk, fresh, bottled, delivered, San Francisco..R	Qt.	.100	.100	.100	.100	.100	.100	.100	.100	.121	.121
Potatoes, white, good to choice, Chicago.....W	Bu.	.605	.480	.615	1.200	1.750	2.700	2.625	1.600	1.250	1.135
Potatoes, Chicago.....R	Bu.	1.020	.775	.796	1.640	2.370	3.455	2.975	2.012	1.623	1.184
Poultry, dressed fowls, New York.....W	Lb.	.185	.195	.220	.230	.220	.265	.248	.240	.258	.285
Poultry, hens, dressed, New York.....R	Lb.	.218	.223	.220	.259	.261	.293	.287	.288	.316	.323
Rice, head, Honduras, New Orleans.....W	Lb.	.051	.048	.043	.043	.048	.049	.071	.072	.070	.077
Rice, head, Louisiana, New Orleans.....R	Lb.	.....	.....	.070	.073	.074	.088	.101	.103	.101	.100
Sugar, granulated, New York.....W	Lb.	.042	.059	.048	.070	.066	.081	.074	.082	.082	.082
Sugar, granulated, New York.....R	Lb.	.049	.066	.054	.074	.074	.087	.084	.090	.092	.097

"A comparison of wholesale and retail price fluctuations, expressed as percentages of the price in October, 1913, is contained in the table that follows. It will be seen from this table that the wholesale prices of practically all articles in October, 1917, had increased to a larger extent than had retail prices. This is particularly noticeable in the case of bacon, flour, ham, lamb, lard, meal, milk, and potatoes. Of the 22 articles included in this table, only 1, granulated sugar, showed a larger per cent of increase in the retail than in the wholesale price. In nearly all instances retail prices were relatively lower in the other months shown in the table than were wholesale prices.

RELATIVE PRICES, WHOLESALE AND RETAIL, OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES, IN OCTOBER, 1914, 1915, AND 1916, AND IN JANUARY, APRIL, JULY, AUGUST, SEPTEMBER, AND OCTOBER, 1917, COMPARED WITH OCTOBER, 1913.

[The initials W=wholesale; R=retail.]

Article and city.	October.				1917					
	1913	1914	1915	1916	Jan.	Apr.	July.	Aug.	Sept.	Oct.
Bacon, short clear sides, Chicago.....W	100	106	88	126	122	169	191	202	212	247
Bacon, sliced, Chicago.....R	100	102	96	101	97	121	134	131	146	145
Beef:										
Fresh, carcass, Chicago.....W	100	111	106	106	106	123	125	129	146	146
Round steak, Chicago.....R	100	110	118	109	105	119	123	126	130	126
Fresh sides, New York.....W	100	104	98	100	102	133	125	131	142	141
Rib roast, bone in, New York.....R	100	103	105	107	110	125	129	132	138	138
Butter, creamery, extra, Chicago.....W	100	102	95	119	128	152	129	136	147	150
Butter, creamery, extra, Chicago.....R	100	96	92	111	124	137	122	127	137	138
Butter, creamery, extra, New York...W	100	101	94	114	128	146	128	132	144	144
Butter, creamery, extra, New York...R	100	99	90	109	123	137	121	125	135	137
Butter, creamery, extra, San Francisco.....W	100	91	81	101	106	116	115	130	130	137
Butter, creamery, extra, San Francisco.....R	100	95	86	101	106	113	114	126	133	136
Eggs, fresh, firsts, Chicago.....W	100	86	99	121	190	120	122	127	151	145
Eggs, strictly fresh, Chicago.....R	100	90	102	115	158	113	122	129	140	141
Eggs, fresh, firsts, New York.....W	100	86	103	119	174	114	121	131	142	138
Eggs, strictly fresh, New York.....R	100	88	95	108	139	89	100	114	124	131
Eggs, fresh, extra, pullets, San Francisco.....W	100	96	110	124	109	80	91	106	123	124
Eggs, strictly fresh, San Francisco...R	100	95	96	99	85	66	70	84	95	108
Flour, winter patents, Kansas City...W	100	125	124	185	220	281	274	317	263	258
Flour, Aristos, Kansas City.....R	100	111	124	164	180	232	232	243	225	221
Flour, standard patents, Minneapolis.....W	100	129	125	199	212	248	270	297	255	237
Flour, Pillsbury's Best, Minneapolis..R	100	125	114	179	193	236	240	256	218	214
Flour, fancy patents, St. Louis.....W	100	122	128	183	209	274	274	310	260	271
Flour, Gold Medal, St. Louis.....R	100	119	111	156	171	207	213	239	221	211
Ham, smoked, Chicago.....W	100	105	99	118	115	148	148	142	160	173
Ham, smoked, sliced, Chicago.....R	100	108	103	112	104	119	129	127	137	137
Lamb, dressed, round, Chicago.....W	100	100	115	126	148	163	193	170	207	200
Lamb, leg of, yearling, Chicago.....R	100	103	103	113	117	133	145	145	162	159
Lard, prime, contract, New York....W	100	95	93	142	149	201	188	211	224	230
Lard, pure, tub, New York.....R	100	98	92	120	131	161	168	169	180	192
Meal, corn, fine, yellow, New York...W	100	119	106	131	169	194	250	325	313	306
Meal, corn, New York.....R	100	103	100	126	146	163	200	191	217	234
Milk, fresh, Chicago.....W	100	108	98	113	113	135	118	128	128	185
Milk, fresh, bottled, delivered, Chicago.....R	100	100	100	113	125	125	125	125	125	161
Milk, fresh, New York.....W	100	100	95	125	128	123	125	150	150	180
Milk, fresh, bottled, delivered, New York.....R	100	100	100	109	111	121	127	139	138	153
Milk, fresh, San Francisco.....W	100	100	97	97	97	97	110	110	149	151
Milk, fresh, bottled, delivered, San Francisco.....R	100	100	100	100	100	100	100	100	121	121
Potatoes, white, good to choice....W	100	79	102	198	289	446	434	264	207	188
Potatoes, Chicago.....R	100	76	78	161	232	339	292	197	159	116
Poultry, dressed fowls, New York....W	100	105	119	124	119	143	134	130	139	154
Poultry, hens, dressed, New York....R	100	102	101	119	120	134	132	132	145	148
Sugar, granulated, New York.....W	100	140	114	167	157	193	176	195	195	195
Sugar, granulated, New York.....R	100	135	110	151	151	178	171	184	188	198



## 9.—PRICE OF BREAD IN SELECTED CITIES, 1913-1917.

The prices given below are the computed prices of a loaf scaled at 16 ounces—that is, 16 ounces of dough—based on reports secured by the Bureau of Labor Statistics, of the actual scaling weights of the 5-cent loaf sold. While it would be highly desirable to present the price of the loaf as actually purchased by the consumer, the complications involved in the relation of the scaled weight to the weight of the bread when it passes over the retailer's counter were found to be such that it was impossible to do so. The loss of weight in baking varies with the formula, with the style of loaf, and with the temperature of the oven. Furthermore, the weight, of course, varies with the time intervening between the removal of the loaf from the oven and its delivery to the consumer, the loss by evaporation also being partly determined by the conditions under which the bread is kept and by the state of the atmosphere.

The customary loss in baking is variously estimated by bakers, but it may be said that a loaf weighing 16 ounces before baking will, when baked and cooled, weigh about 14½ ounces.

It must be borne clearly in mind that the price of bread varies with the kind of bread and the quality of materials used in its composition.

No fancy, special, graham, rye, or restaurant breads are included in these prices.

The following table shows the price of a loaf of bread weighing 16 ounces before baking in 16 important industrial cities of the United States, on August 15 of each year, 1913, 1914, 1915, and 1916, and October 15, 1917.

PRICE OF A LOAF OF BREAD WEIGHING 16 OUNCES BEFORE BAKING ON THE 15TH OF AUGUST, 1913 TO 1916, AND OCTOBER 15, 1917.

City.	Price of loaf on				
	August 15, 1913.	August 15, 1914.	August 15, 1915.	August 15, 1916.	October 15, 1917.
Atlanta, Ga.....	\$0.056	\$0.054	\$0.061	\$0.063	\$0.091
Baltimore, Md.....	.050	.050	.057	.056	.082
Birmingham, Ala.....	.047	.049	.054	.057	.094
Chicago, Ill.....	.052	.053	.058	.058	.093
Cincinnati, Ohio.....	.043	.044	.052	.051	.081
Cleveland, Ohio.....	.050	.051	.054	.056	.089
Dallas, Tex.....	.051	.050	.060	.060	.088
Denver, Colo.....	.049	.048	.055	.057	.089
Minneapolis, Minn.....	.050	.050	.058	.057	.092
New Haven, Conn.....	.053	.053	.056	.057	.089
New Orleans, La.....	.044	.041	.049	.048	.077
New York, N. Y.....	.055	.059	.060	.059	.088
Portland, Ore.....	.049	.049	.055	.054	.086
St. Louis, Mo.....	.049	.050	.062	.057	.093
San Francisco, Cal.....	.054	.054	.057	.056	.083
Washington, D. C.....	.052	.051	.056	.059	.090

## 10.—RETAIL PRICES OF COAL, 1907-1917.

Reports as to retail coal prices are received by the Bureau of Labor Statistics from approximately 250 coal dealers in the same 44 cities from which reports are received as to retail prices of food.

The table given herewith shows the relative prices of Pennsylvania anthracite stove and chestnut coal and of bituminous coal on January 15th, for the years of 1907-1917, inclusive.

RELATIVE RETAIL PRICES OF COAL EACH YEAR, 1907-1917, INCLUSIVE, AND ON JANUARY 15 AND JULY 15, OF EACH YEAR OF THE SAME PERIOD.

[Average price for 1915 = 100.]

Month and Year.	Pennsylvania white ash, stove.	Pennsylvania white ash, chestnut.	Bituminous
January, 1907.....	94	92	102
January, 1908.....	95	94	103
January, 1909.....	95	94	99
January, 1910.....	95	94	100
January, 1911.....	95	94	103
January, 1912.....	96	96	100
January, 1913.....	104	103	105
January, 1914.....	100	100	106
January, 1915.....	101	101	102
January, 1916.....	103	103	101
January, 1917.....	122	121	138

11.—PRICE OF MANUFACTURED AND NATURAL GAS,  
1915-1917.

The following table shows the returns made by gas companies to the Bureau of Labor Statistics, by cities, during the period, 1915-1917.

PRICE OF MANUFACTURED AND NATURAL GAS PER 1,000 CUBIC FEET, BY COMPANIES AND CITIES, 1915-1917.

City and company.	Price per 1,000 cubic feet.		
	October 15, 1915.	April 15, 1916.	April 15, 1917.
Atlanta, Ga.....	\$1.00	\$1.00	\$1.00
Baltimore, Md.....	.80	.75	.75
Birmingham, Ala.....	.95	.95	.95
Boston, Mass.:			
Company A.....	.80	.80	.80
Company B.....	.80	.80	.80
Company C.....	.80	.80	.80
Bridgeport, Conn.....		1.00	1.00
Buffalo, N. Y.....	1.00	1.00	1.00
Butte, Mont.....	1.50	1.50	
Charleston, S. C.....	1.10	1.10	1.00
Chicago, Ill.....	.80	.80	.80
Cleveland, Ohio.....	.80	.80	.80
Denver, Colo.....	.80	.80	.80
Detroit, Mich.....	.75	.75	.75
El Paso, Tex.....	1.30	1.30	
Fall River, Mass.....	.80	.80	.80
Indianapolis, Ind.....	.55	.55	.55
Jacksonville, Fla.....	1.15	1.15	1.15
Manchester, N. H.....	1.00	1.00	1.00
Memphis, Tenn.....	1.00	1.00	1.00

## PRICE OF MANUFACTURED AND NATURAL GAS PER 1,000 CUBIC FEET, BY COMPANIES AND CITIES, 1915-1917—Continued.

City and company.	Price per 1,000 cubic feet.		
	October 15, 1915.	April 15, 1916.	April 15, 1917.
Milwaukee, Wis.....	\$0.75	\$0.75	\$0.75
Minneapolis, Minn.....	.80	.77	.77
Newark, N. J.....	.90	.90	.90
New Haven, Conn.....	.90	.90	.90
New Orleans, La.....	1.00	1.00	1.00
New York, N. Y.:			
Company A.....	.80	.80	.80
Company B.....	.80	.80	.80
Company D.....	.95	.95	.95
Company E.....	.80	.80	.80
Company F.....	.80	.80	.80
Company G.....	.80	.80	.80
Company H.....	.80	.80	.80
Company I.....	.80	.80	.80
Company J.....	.80	.80	.80
Omaha, Nebr.....	1.00	1.00	1.00
Philadelphia, Pa.....	1.00	1.00	1.00
Pittsburgh, Pa.:			
Company A.....	1.00	1.00	1.00
Company B.....	1.00	1.00	1.00
Portland, Ore.....	.95	.95	.95
Providence, R. I.....	.85	.85	.85
Richmond, Va.....	.90	.80	.80
Rochester, N. Y.....			.95
St. Louis, Mo.....	.80	.80	.75
St. Paul, Minn.....	.90	.85	.85
Salt Lake City, Utah.....	1.90	1.90	1.90
San Francisco, Cal.....	.85	.85	.85
Scranton, Pa.:			
Company A.....	.95	.95	.95
Company B.....	1.20	1.20	1.20
Seattle, Wash.....	1.00	1.00	1.00
Springfield, Ill.....	1.00	1.00	1.00
Washington, D. C.:			
Company A.....	.85	.85	.75
Company B.....	1.00	1.00	.85

## NATURAL GAS.

Buffalo, N. Y.....	\$0.30	\$0.30	\$0.30
Cincinnati, Ohio.....	.30	.30	.35
Cleveland, Ohio.....	.30	.30	.30
Columbus, Ohio.....			.30
Dallas, Tex.....	.45	.45	.45
Kansas City, Mo.....	.27	.27	.30
Little Rock, Ark.....	.40	.40	.40
Los Angeles, Cal.:			
Company B.....	.645	.645	.645
Louisville, Ky.....	.648	.648	.648
Pittsburgh, Pa.:			
Company C.....	.27½	.27½	.27½
Company D.....	.30	.30	.30
Company E.....	.27½	.27½	.27½
Company G.....	.27½	.27½	.27½
Company H.....	.27½	.27½	.27½

<sup>1</sup> Rate entered is for first 2,000 cubic feet; next 20,000 cubic feet, 80 cents; all over 22,000 cubic feet, 70 cents.

<sup>2</sup> Rate being contested.

## MANUFACTURED AND NATURAL GAS MIXED.

City and company.	Price per 1,000 cubic feet.		
	October 15, 1915.	April 15, 1916.	April 15, 1917.
Los Angeles, Cal.:			
Company A.....	\$0.68	\$0.68	\$0.68
Company C.....	.68	.68	.....

## 12.—RELATIVE COST OF FOOD IN THE PRINCIPAL AMERICAN CITIES.

The following table, which was prepared by Professor Ogburn, of the University of Washington, is of interest and value in showing comparative prices of foodstuffs in the principal American cities. It is based on prices contained in a Bulletin of the United States Bureau of Labor Statistics (Whole Number 156).

### RELATIVE COST OF FOOD IN LEADING CITIES.

[Portland, Oregon = 100].

Minneapolis.....	92.7	Manchester.....	105.7
St Paul.....	94.8	Schenectady.....	106.
Denver.....	96.2	Scranton.....	106.3
Milwaukee.....	97.6	Washington.....	106.4
Cincinnati.....	97.8	Little Rock.....	106.6
Detroit.....	98.1	Pittsburgh.....	106.6
St. Louis.....	98.2	San Francisco.....	106.6
Buffalo.....	98.8	New York.....	106.7
Portland.....	100.	Philadelphia.....	107.5
Baltimore.....	100.2	Dallas.....	107.6
Chicago.....	101.3	Boston.....	108.4
Salt Lake City.....	101.9	Charleston.....	108.6
Omaha.....	102.3	Louisville.....	109.
Kansas City.....	102.4	Los Angeles.....	110.3
Richmond.....	102.5	Fall River.....	110.3
Memphis.....	102.7	New Haven.....	110.8
Seattle.....	102.8	Providence.....	112.5
Springfield.....	103.5	Jacksonville.....	113.
Indianapolis.....	103.6	Newark.....	114.1
Cleveland.....	104.4	Birmingham.....	115.1
Atlanta.....	104.4		
New Orleans.....	104.6		

## 13.—RETAIL PRICES IN 24 CITIES.

### PREPARED FOR COMMITTEE ON HEALTH OF CITY COUNCIL OF CITY OF CHICAGO, BY FREDERICK REX, MUNICIPAL REFERENCE LIBRARIAN.

This pamphlet contains retail prices of 20 principal articles of food as of November 1, 1916, in 24 cities of the United States. For purposes of comparison the following table is of interest.

### AVERAGE RETAIL PRICE OF THE 20 ARTICLES OF FOOD IN EACH OF THE 24 CITIES.

Rank.		Average retail price.
1.	New Haven, Conn.....	\$0.45
2.	Los Angeles, Cal.....	.42
3.	Philadelphia, Pa.....	.41
4.	Toledo, Ohio.....	.40
5.	Baltimore, Md.....	.40
6.	Pittsburgh, Pa.....	.40
7.	Birmingham, Ala.....	.38
8.	Chicago, Ill.....	.38
9.	Milwaukee, Wis.....	.38
10.	San Francisco, Cal.....	.38
11.	Minneapolis, Minn.....	.38
12.	Rochester, N. Y.....	.38
13.	New York City.....	.37
14.	Jersey City.....	.37
15.	Providence, Rhode Island.....	.37
16.	Atlanta, Ga.....	.36
17.	Cleveland, Ohio.....	.35
18.	Newark, Ohio.....	.34
19.	Dayton, Ohio.....	.33
20.	Cincinnati, Ohio.....	.32
21.	Indianapolis, Ind.....	.31
22.	Oakland, Cal.....	.31
23.	Columbus, Ohio.....	.30
24.	Kansas City, Mo.....	.25



#### 14.—REPORT OF THE RHODE ISLAND COMMISSION.

The Food Products Report of the Commission on Living Costs in Rhode Island, on January 29, 1917, published as part of its findings the following data as to the increase in retail prices in Rhode Island during the year ending November 1, 1916. (pp. 16-20).

##### FOOD PRICES.

"So many factors enter into the fixing of prices for food, such as grades, special sales, quality of containers, frequency of deliveries, and length of credit, that it is difficult to compare prices in one store with prices for the same commodities in another store upon any fixed date. It is even more difficult to accurately compare prices for a certain number of commodities from year to year, but it is believed that fair comparisons are obtainable when prices for a certain number of commodities are secured from more than a hundred stores upon a certain date, and the average of these prices be compared with average prices for the same commodities in the same stores upon the same date of the preceding year.

"The statistics presented in the following tables are based upon prices obtained as of November 1, 1916, in 110 representative stores in the State of Rhode Island, of which 32 were in Providence, 20 in the cities of Pawtucket and Central Falls, 10 in Woonsocket, 9 in Newport and 39 in other populous sections of the State.

"The average wholesale prices for table necessities show an average increase of 27.8 per cent, November 1, 1916, as compared with the average wholesale prices for the same necessities, November 1, 1915; while the average increase in retail prices for the same comparative period equals 23.4 per cent.

"It is noticeable that wholesale prices show increases averaging 4.4 per cent more than the average increase in retail prices.

"Increase of more than 50 per cent in both wholesale and retail prices are found in the following: Beans, 60 per cent; bread flour, 58.8 per cent by the barrel and 62.5 per cent by the bag; currants, 72.3 per cent; lard, compound, 56.3 per cent; lard, pure, 57.1 per cent; cabbage, 115.7 per cent; potatoes, 98.5 per cent; and yellow onions, 62.5 per cent.

"Only one article in the list of wholesale prices (fresh pork) shows a decrease in 1916 over 1915, and upon investigating the reason therefor it was found that an abnormal wholesale supply on hand November 1, 1916, compared with November 1, 1915, caused a temporary reduction in wholesale quotations.

"Rice is the only article of food which shows any reduction in retail prices, and that but an infinitesimal one.

"It should be noted that since November 1, 1916, sharp advances have taken place in a number of articles of food, noticeable among which are the advances which have caused almost prohibitive prices for flour and potatoes.

"Other than for pork products, the advance in meats, compared with many other articles of food, has been comparatively small. The reason is undoubtedly because meats have reached a point where the average



family has curtailed its purchases in this direction and refuses to pay higher prices, the result being that meats are disposed of in the average retail store or market with a much less margin of profit, if any at all, than for any other articles of food.

"In connection with the investigation of retail prices for 1916, a number of facts have been ascertained which it is believed are so important in connection with the tabulation of average prices that they should be made a matter of record.

"The five-cent loaf of bread, 16 ounces to the loaf, has been almost entirely superseded by the six-cent loaf of 13 ounces; although a few large stores operating their own bakeries at the time of this investigation were selling a 16-ounce loaf of bread for five cents.

"Domestic or near-by eggs may be classed as an article of food, prices for which are fixed in accordance with season and proximity to markets. In suburban or country stores the price for eggs is generally five cents per dozen cheaper than in the cities of the state, and variations in city prices are apt to be the result of mixing selected fresh Western eggs with domestic eggs, thereby reducing the average cost to the dealer.

"Prices for fresh meats are so affected by quality or grade, and style of trimming, that the variations between high and low prices for lamb and mutton chops, roasts, and steaks of all kinds produce prices which as presented seem abnormally low.

"Such low prices as help to make up the average for the 110 stores visited are not necessarily economical ones, as the waste and quality which accompanies such prices are apt to deduct from their real worth.

"Prices for coffee and tea are so dependent upon quality and brand that comparative prices for the same are rather misleading. Retail prices for coffee range from 17 to 40 cents and for so-called Formosa tea from 22 cents to \$1.00 per pound.

"Imported macaroni and spaghetti have been almost entirely superseded by the domestic article during the past two years, so much so, in fact, that but few stores can be found which are carrying the imported product.

"The sharp advances in prices for cabbage, potatoes and onions are due to short crops caused by unseasonable weather, although there is no reason for believing that even under normal conditions these articles of food would not have risen in proportion to the rise in other table necessities during the past year.

"Other than for reductions in prices which always come in certain seasons of the year, there is little hope of any general reduction in the cost of food until exports are reduced for one reason or another."

TABLE I.—AVERAGE WHOLESALE PRICES, 45 ARTICLES OF FOOD IN THE CITY OF PROVIDENCE, SHOWING COMPARATIVE PRICES FOR NOVEMBER 1, 1915 AND 1916.

Food.	Average prices.		Percent of Increase for 1916.
	November 1, 1915.	November 1, 1916.	
Beans, pea, York State, per bu.....	\$4.125	\$7.292	76.8
Butter, creamery, tub, per lb.....	.296	.371	25.4
Cheese, creamery, per lb.....	.193	.229	18.6
Coffee, per lb.....	.238	.238	00.0
Eggs, domestic, per doz.....	.487	.592	21.6
Eggs, fresh, Western, per doz.....	.382	.427	11.8
Eggs, storage, per doz.....	.261	.321	23.0
Fish, cod, cured, boneless, per lb.....	.139	.161	15.8
Flour, rye, per bbl. (196 lbs.).....	6.15	8.37	36.1
Flour, wheat, bread, per bbl.....	6.064	10.114	66.8
Flour, wheat, pastry, per bbl.....	5.48	8.82	60.9
Fruit, currants, per lb.....	.124	.208	67.7
Fruit, prunes, Calif., per lb.....	.098	.106	8.2
Fruit, raisins, seeded, per lb.....	.099	.119	20.2
Lard, compound, per lb.....	.105	.158	50.5
Lard, pure, per lb.....	.115	.184	60.0
Macaroni, domestic, per lb.....	.079	.088	11.4
Meal, corn, per lb.....	.0195	.0305	56.4
Meal, oat, per lb.....	.031	.037	1.9
Meat, bacon, per lb.....	.179	.207	10.1
Meat, fowl, native, per lb.....	.188	.231	22.9
Meat, fowl, Western, per lb.....	.176	.222	26.1
Meat, hams, whole, per lb.....	.159	.198	24.5
Meat, lambs, whole, per lb.....	.154	.162	5.2
Meat, mutton, whole, per lb.....	.13	.152	16.9
Meat, pork, fresh, per lb.....	.182	.167	*—8.2
Meat, pork, salt, per lb.....	.117	.158	35.0
Meat, beef, sides, per lb.....	.114	.123	7.9
Meat, beef, loins and rumps, per lb.....	.153	.17	11.1
Meat, beef, standing ribs, per lb.....	.134	.147	9.7
Meat, beef, legs, per lb.....	.12	.124	3.3
Meat, beef, chucks, per lb.....	.117	.124	6.0
Meat, beef, plates, per lb.....	.086	.091	5.8
Meat, sausage, per lb.....	.175	.203	16.0
Meat, tripe, per lb.....	.046	.055	19.6
Molasses, New Orleans, per gal.....	.39	.432	10.8
Oil, Olive, imported, per gal.....	2.166	2.475	14.3
Rice, Carolina, per lb.....	.066	.066	00.0
Salt, table, per lb.....	.012	.014	16.7
Spaghetti, domestic, per lb.....	.079	.088	11.4
Sugar, granulated, per lb.....	.056	.078	39.3
Tea, Formosa, per lb.....	.335	.343	2.4
Vegetables, cabbage, per lb.....	.006	.025	150.0
Vegetables, potatoes, per bu.....	.86	1.74	102.3
Vegetables, onions, yellow, per bu.....	1.116	1.781	59.6

\*Decrease.

TABLE II.—AVERAGE RETAIL PRICES, 59 ARTICLES OF FOOD IN 110 RHODE ISLAND STORES, SHOWING COMPARATIVE PRICES FOR NOVEMBER 1, 1915 AND 1916.

Food.	Average prices.		Percent of Increase or decrease
	November 1, 1915.	November 1, 1916.	
Beans, pea, York State, per qt.....	\$.15	\$.24	60.00
Bread, no. oz. per 5c loaf.....	13.5 oz.	12.53 oz.	7.2
Bread, no. oz. per 6c loaf.....		12.10	
Butter, creamery, tub, per lb.....	\$.333	\$.432	29.73
Cheese, creamery, per lb.....	.222	.279	25.67
Coffee, per lb.....	.303	.306	1.01
Eggs, domestic, per doz.....	.58	.639	10.17
Eggs, fresh, Western, per doz.....	.40	.473	18.25
Eggs, storage, per doz.....	.31	.374	20.64
Fish, cod, cured, boneless, per lb.....	.168	.19	13.10
Flour, rye, per lb.....	.043	.051	18.60
Flour, wheat bread, per bbl.....	7.20	11.435	58.82
Flour, wheat bread, per bag.....	.879	1.429	62.57
Flour, wheat pastry, per bbl.....	6.30	9.996	58.51
Flour, wheat pastry, per bag.....	.766	1.262	64.77
Fruit, currants, per lb.....	.123	.212	72.35
Fruit, prunes, Calif., per lb.....	.134	.139	3.73
Fruit, raisins, seeded, per lb.....	.121	.138	14.05
Lard, compound, per lb.....	.11	.172	56.36
Lard, pure, per lb.....	.133	.209	57.14
Macaroni, domestic, per lb.....	.13	.148	13.85
Meal, corn, per lb.....	.036	.043	19.44
Meal, oat, per lb.....	.045	.066	46.66
Meat, bacon, sliced, per lb.....	.223	.256	14.79
Meat, corned beef, brisket, per lb.....	.195	.205	5.12
Meat, corned beef, other, per lb.....	.153	.162	5.88
Meat, fowl, native, per lb.....	.248	.285	14.91
Meat, fowl, Western, per lb.....	.225	.266	18.22
Meat, ham, whole, smoked, per lb.....	.189	.239	26.45
Meat, lamb, forequarters, per lb.....	.158	.170	7.59
Meat, lamb, legs, per lb.....	.205	.254	23.90
Meat, lamb, chops, rib, per lb.....	.316	.342	8.23
Meat, lamb, chops, loin, per lb.....	.365	.373	2.19
Meat, mutton, forequarters, per lb.....	.117	.123	5.13
Meat, mutton, legs, per lb.....	.197	.203	3.05
Meat, mutton chops, rib, per lb.....	.225	.246	9.33
Meat, mutton, chops, loin, per lb.....	.277	.303	9.38
Meat, pork, fresh, per lb.....	.203	.233	14.77
Meat, pork, salt, per lb.....	.155	.197	27.09
Meat, beef, rib roast, per lb.....	.229	.242	5.67
Meat, beef, sirloin, roast, per lb.....	.318	.332	4.40
Meat, sausage, per lb.....	.213	.251	17.84
Meat, steak, hamburger, per lb.....	.216	.222	2.77
Meat, steak, porterhouse, per lb.....	.405	.418	3.21
Meat, steak, rump, per lb.....	.378	.383	1.33
Meat, steak, sirloin, per lb.....	.373	.389	4.29
Meat, steak, top round, per lb.....	.316	.328	3.80
Meat, steak, whole round, per lb.....	.285	.299	4.91
Meat, tripe, per lb.....	.104	.114	9.62
Molasses, New Orleans, per gal.....	.588	.614	4.42
Oil, olive, imported, per qt.....	.855	.924	8.07
Rice, Carolina, whole, per lb.....	.095	.094	*—, 10
Salt, table, per lb.....	.015	.015	.00
Spaghetti, domestic, per lb.....	.131	.147	12.21
Sugar, granulated, lbs. for \$1.....	15.5 lbs.	12.07 lbs.	22.14
Vegetables, cabbage, per lb.....	\$.019	\$.041	115.79
Vegetables, potatoes, per bu.....	1.00	1.985	98.5
Vegetables, onions, yellow, per pk.....	.35	.569	62.57

\*Decrease.

## CHAPTER II

### WHOLESALE PRICES.

#### 1. AVERAGE AND RELATIVE WHOLESALE PRICES OF 24 COMMODITIES.

The following table which has been compiled from the publications of the United States Bureau of Labor Statistics shows by years, for the period 1890-1917, the average and relative wholesale prices of 17 foodstuffs, together with lumber, timber, raw cotton, wool, pig and bar iron, and anthracite and bituminous coal.

AVERAGE AND RELATIVE WHOLESALE PRICES OF COMMODITIES 1890-1917.

Year.	Beef, good to choice live weight, 100 pounds		Hogs, fair to good live weight, 100 pounds		Bacon, clear, pound		Ham, sugar cured, pound.	
	Average	Relative.	Average.	Relative.	Average.	Relative.	Average.	Relative.
1890-1899 . . . .	\$4.7347	100.0	.....	.....	\$0.0675	100.0	\$0.0984	100.0
1890. . . . .	4.1375	87.4	.....	.....	.0603	89.3	.0995	101.1
1891. . . . .	5.0976	107.7	.....	.....	.0699	103.6	.0982	99.8
1892. . . . .	4.4995	95.0	.....	.....	.0787	116.6	.1076	109.3
1893. . . . .	4.8394	102.2	.....	.....	.1048	155.3	.1249	126.9
1894. . . . .	4.5245	95.6	.....	.....	.0751	111.3	.1019	103.5
1895. . . . .	4.9344	104.2	.....	.....	.0650	96.3	.0947	96.2
1896. . . . .	4.2712	90.2	.....	.....	.0494	73.2	.0943	95.8
1897. . . . .	4.7736	100.8	.....	.....	.0541	80.1	.0894	90.9
1898. . . . .	4.8846	103.2	.....	.....	.0596	88.3	.0807	82.0
1899. . . . .	5.3851	113.7	.....	.....	.0583	86.4	.0923	93.8
1900. . . . .	5.3938	113.9	.....	.....	.0752	111.4	.1025	104.2
1901. . . . .	5.5901	118.1	.....	.....	.0891	132.0	.1075	109.2
1902. . . . .	6.5572	138.5	.....	.....	.1073	159.0	.1211	123.1
1903. . . . .	5.0615	106.9	.....	.....	.0959	142.1	.1271	129.2
1904. . . . .	5.1923	109.7	.....	.....	.0775	114.8	.1072	108.9
1905. . . . .	5.2192	110.2	.....	.....	.0800	118.5	.1046	106.3
1906. . . . .	5.3572	113.1	.....	.....	.0942	139.6	.1235	125.5
1907. . . . .	5.8120	122.8	.....	.....	.0954	141.3	.1303	132.4
1908. . . . .	5.9976	126.7	.....	.....	.0901	133.5	.1125	114.3
1909. . . . .	6.4529	136.3	.....	.....	.1173	173.8	.1310	133.1
1910. . . . .	7.0173	148.2	.....	.....	.1332	197.3	.1644	167.1
1911. . . . .	6.7272	142.1	.....	.....	.0949	140.6	.1398	142.1
1912. . . . .	8.4024	177.5	.....	.....	.1107	164.0	.1429	145.2
1913. . . . .	8.5072	179.7	.....	.....	.1274	188.7	.1662	168.9
1914. . . . .	9.0387	190.9	\$8.371	.....	.1323	195.9	.1670	169.7
1915. . . . .	8.7015	183.8	7.159	.....	.1155	171.1	.1531	155.6
1916. . . . .	9.573	202.2	9.508	.....	.149	220.7	.185	188.0
1917. . . . .	11.177	236.1	12.584	.....	.179	265.2	.212	215.4



## AVERAGE AND RELATIVE WHOLESALE PRICES OF COMMODITIES, 1890-1917—Continued.

Year.	Pork, salt, mess., barrel.		Lard, pound.		Eggs, dozen. New York.		Milk, fresh, quart, New York.	
	Average.	Relative.	Average.	Relative.	Average.	Relative.	Average.	Relative.
1890-1899....	\$11.6332	100.0	\$0.0654	100.0	\$0.1963	100.0	\$0.0255	100.0
1890.....	12.1502	104.0	.0633	96.8	.1945	99.1	.0263	103.1
1891.....	11.3029	97.2	.0660	100.9	.2160	110.0	.0267	104.7
1892.....	11.5252	99.1	.0771	117.9	.2167	110.4	.0268	105.1
1893.....	18.3389	157.6	.1030	157.5	.2247	114.5	.0279	109.4
1894.....	14.1262	121.4	.0773	118.2	.1835	93.5	.0263	103.1
1895.....	11.8255	101.7	.0653	99.8	.2002	102.0	.0253	99.2
1896.....	8.9399	76.8	.0469	71.7	.1741	88.7	.0234	91.8
1897.....	8.9087	76.6	.0441	67.4	.1718	87.5	.0235	92.2
1898.....	9.8678	84.8	.0552	84.4	.1817	92.6	.0239	93.7
1899.....	9.3462	80.3	.0556	85.0	.1994	101.6	.0253	99.2
1900.....	12.5072	107.5	.0690	105.5	.1977	100.7	.0274	107.5
1901.....	15.6108	134.2	.0885	135.3	.2095	106.7	.0262	102.7
1902.....	17.9399	154.2	.1059	161.9	.2409	122.7	.0288	112.9
1903.....	16.6514	143.1	.0877	134.1	.2418	123.2	.0288	112.9
1904.....	14.0288	120.6	.0731	111.8	.2650	135.0	.0275	107.8
1905.....	14.4183	123.9	.0745	113.9	.2712	138.2	.0289	113.3
1906.....	17.5120	150.5	.0887	135.6	.2615	133.2	.0301	118.0
1907.....	17.5684	151.0	.0920	140.7	.2771	141.2	.0335	131.4
1908.....	15.9736	137.3	.0908	138.8	.2788	142.0	.0329	129.0
1909.....	21.3438	183.5	.1169	178.7	.3146	160.3	.0338	132.5
1910.....	23.7380	204.1	.1253	191.6	.3258	166.0	.0368	144.3
1911.....	19.1587	164.7	.0908	138.8	.2977	151.7	.0336	131.8
1912.....	19.2854	165.8	.1049	160.4	.3315	168.9	.0368	144.3
1913.....	22.4712	193.2	.1101	168.3	.3268	166.5	.0353	138.4
1914.....	22.7358	195.5	.1037	158.5	.2656	135.3	.0351	137.6
1915.....	18.3173	157.5	.0940	143.7	.2569	130.9	.0355	139.2
1916.....	26.770	230.1	.135	206.4	.293	149.3	.039	148.3
1917.....	33.646	289.2	.173	264.5	.399	203.3	.050	190.1

Year.	Sugar, granulated, pound.		Potatoes, white, bushel.		Beans, Navy, bushel.		Coal, anthracite, stove, long ton.	
	Average.	Relative.	Average.	Relative.	Average.	Relative.	Average.	Relative.
1890-1899....	\$0.0473	100.0	\$0.4991	100.0	\$1.6699	100.0	\$3.7949	100.0
1890.....	.0617	130.5	.5956	119.3	2.0292	121.5	3.7108	97.8
1891.....	.0471	99.7	.7730	154.9	2.2531	134.9	3.8542	101.6
1892.....	.0435	92.1	.4546	91.1	1.8698	112.0	4.1532	109.4
1893.....	.0484	102.3	.6714	134.5	1.9906	119.2	4.1931	110.5
1894.....	.0411	87.0	.6128	122.8	1.8469	110.6	3.6003	94.9
1895.....	.0416	87.9	.4326	86.7	1.7896	107.2	3.1264	82.4
1896.....	.0453	95.9	.1965	39.4	1.1740	70.3	3.7942	100.0
1897.....	.0450	95.1	.3279	65.7	1.0448	62.6	4.0146	105.8
1898.....	.0497	105.2	.5094	102.1	1.2479	74.7	3.7978	100.1
1899.....	.0492	104.2	.4172	83.6	1.4531	87.0	3.7047	97.6
1900.....	.0533	112.8	.3736	74.9	2.0969	125.6	3.9451	104.0
1901.....	.0505	106.8	.5642	113.0	2.1927	131.3	4.3224	113.9
1902.....	.0446	94.2	.5958	119.4	1.9198	115.0	4.4627	117.6
1903.....	.0464	98.2	.5249	105.2	2.2625	135.5	4.8245	127.1
1904.....	.0477	101.0	.7301	146.3	2.0104	120.4	4.8246	127.1
1905.....	.0526	111.2	.4026	80.7	2.1500	128.8	4.8226	127.1
1906.....	.0452	95.5	.5476	109.7	1.9000	113.8	4.8615	128.1
1907.....	.0465	98.4	.4912	98.4	1.7771	106.4	4.8215	127.1
1908.....	.0494	104.5	.7119	142.6	2.3198	138.9	4.8226	127.1
1909.....	.0476	100.7	.6858	137.4	2.4500	146.7	4.8196	127.0
1910.....	.0496	104.9	.4275	85.7	2.3990	143.7	4.8178	127.0
1911.....	.0533	112.8	.7706	154.4	b2.2885	137.0	4.8063	126.7
1912.....	.0505	106.7	.9133	183.0	b4.6614	279.1	5.0329	132.6
1913.....	.0427	90.4	.5932	118.9	b3.9896	238.9	5.0613	133.4
1914.....	.0471	99.7	2.1200	424.8	b4.0333	241.5	5.0607	133.4
1915.....	.0556	117.5	1.3041	261.3	b5.8125	348.1	5.0446	132.9
1916.....	.069	145.9	1.111	222.6	b8.450	506.0	5.454	143.7
1917.....	.069	145.9	2.180	436.8	b11.517	689.7	5.682	149.7

b—For 100 pounds.



## AVERAGE AND RELATIVE WHOLESALE PRICES OF COMMODITIES, 1890-1917—Continued.

Year.	Lumber, white pine, clear, thousand feet.		Wheat, spring, Chicago, bushel.		Corn, bushel.		Wheat, flour, barrel.	
	Average.	Relative.	Average.	Relative.	Average.	Relative.	Average.	Relative.
1890-1899....	\$18.4646	100.0	\$0.7510	100.0	\$0.3804	100.0	.....	.....
1890.....	20.7500	112.4	.8933	118.9	.3950	103.8	.....	.....
1891.....	19.9583	108.1	.9618	128.1	.5744	151.0	.....	.....
1892.....	18.5000	100.2	.7876	104.9	.4500	118.3	.....	.....
1893.....	18.5000	100.2	.6770	90.1	.3964	104.2	.....	.....
1894.....	18.5000	100.2	.5587	74.4	.4326	113.7	.....	.....
1895.....	16.9167	91.6	.6000	79.9	.3955	104.0	.....	.....
1896.....	16.4167	88.9	.6413	85.4	.2580	67.8	.....	.....
1897.....	16.4375	89.0	.7949	105.8	.2546	66.9	.....	.....
1898.....	18.6250	100.9	.8849	117.8	.3144	82.6	.....	.....
1899.....	20.0417	108.5	.7109	94.7	.3333	87.6	.....	.....
1900.....	20.7083	112.2	.7040	93.7	.3811	100.2	.....	.....
1901.....	19.6667	106.5	.7187	95.7	.4969	130.6	.....	.....
1902.....	21.0000	113.7	.7414	98.7	.5968	156.9	.....	.....
1903.....	21.0000	113.7	.7895	105.1	.4606	121.1	.....	.....
1904.....	21.4167	116.0	1.0390	138.3	.5046	132.6	Not obtainable.	.....
1905.....	24.9167	134.9	1.0104	134.5	.5010	131.7	.....	.....
1906.....	29.3333	158.9	.7931	105.6	.4632	121.8	.....	.....
1907.....	30.50000	165.2	.9073	120.8	.5280	138.8	.....	.....
1908.....	30.5000	165.2	.9899	131.8	.6843	179.9	.....	.....
1909.....	33.0417	178.9	1.1997	159.7	.6677	175.5	.....	.....
1910.....	30.8000	166.8	1.0973	146.1	.5810	152.7	.....	.....
1911.....	30.5909	165.7	.9844	131.1	.5900	155.1	.....	.....
1912.....	33.1364	179.5	1.0490	139.7	.6855	180.2	.....	.....
1913.....	32.1364	174.0	.9533	126.9	.6251	164.3	.....	.....
1914.....	29.6250	160.4	1.0412	138.6	.6953	182.7	4.363	.....
1915.....	28.1818	152.6	1.3443	179.0	.7295	191.8	5.860	.....
1916.....	31.82	172.3	.....	.....	.825	216.9	6.364	.....
d1917.....	.....	.....	.....	.....	1.310	344.4	8.833	.....

d—January-March, 1917.

Year.	Corn meal, yellow, barrel.		Butter, pound.		Cheese, pound, New York.		Cotton, upland, middling (N.Y.), pound	
	Average.	Relative.	Average.	Relative.	Average.	Relative.	Average.	Relative.
1890-1899....	\$1.0169	100.0	\$0.2170	100.0	\$0.0987	100.0	\$0.0776	100.0
1890.....	1.0200	100.3	.2238	103.1	.0958	97.1	.1109	142.9
1891.....	1.4579	143.4	.2501	115.3	.1011	102.4	.0861	110.8
1892.....	1.1608	114.2	.2528	116.5	.1058	107.2	.0769	99.0
1893.....	1.0833	106.5	.2581	118.9	.1076	109.0	.0832	107.2
1894.....	1.0629	104.5	.2194	101.1	.1060	107.4	.0700	90.0
1895.....	1.0613	104.4	.2064	95.1	.0929	94.1	.0730	94.0
1896.....	.7854	77.2	.1793	82.6	.0908	92.0	.0792	102.0
1897.....	.7633	75.1	.1837	84.7	.0968	98.1	.0715	92.0
1898.....	.8463	83.2	.1886	86.9	.0822	83.3	.0597	96.9
1899.....	.9273	91.2	.2075	95.6	.1075	108.9	.0658	84.7
1900.....	.9908	97.4	.2178	100.4	.1128	114.3	.0961	123.8
1901.....	1.1875	116.8	.2114	97.4	.1011	102.4	.0863	111.1
1902.....	1.5250	150.0	.2413	111.2	.1126	114.1	.0893	115.1
1903.....	1.2783	125.7	.2302	106.1	.1217	123.3	.1124	144.7
1904.....	1.3333	131.1	.2178	100.4	.1019	103.2	.1210	155.9
1905.....	1.3250	130.3	.2429	111.9	.1212	122.8	.0955	123.1
1906.....	1.2625	124.2	.2459	113.3	.1313	133.0	.1103	142.0
1907.....	1.3575	133.5	.2761	127.2	.1414	143.3	.1188	153.0
1908.....	1.6146	158.8	.2692	124.1	.1364	138.2	.1046	134.8
1909.....	1.6104	158.4	.2893	133.3	.1485	150.5	.1211	156.0
1910.....	1.4792	145.5	.2977	137.2	.1572	159.3	.1512	194.8
1911.....	1.2913	127.0	.2644	121.8	.1401	141.9	.1304	168.0
1912.....	1.6521	162.5	.2968	136.8	.1645	166.7	.1150	148.2
1913.....	1.4250	140.1	.3077	141.8	.1541	156.1	.1279	164.8
1914.....	1.5708	154.4	.2881	132.7	.1518	153.8	.1210	155.9
1915.....	1.7250	169.6	.2846	131.2	.1509	152.9	.1015	130.8
1916.....	2.060	202.6	.327	150.7	c.174	176.3	.145	186.9
d1917.....	2.717	267.2	.400	184.3	c.224	227.0	.198	255.2

d—January-March, 1917.

c—American-Chicago.

## AVERAGE AND RELATIVE WHOLESALE PRICES OF COMMODITIES, 1890-1917—Concluded.

Year.	Wool, Ohio, medium fleece scoured, pound.		Pig Iron, No. 1, foundry, long ton.		Bar Iron, best, refined, long ton.		Coal, bituminous, ton.	
	Average.	Relative.	Average.	Relative.	Average.	Relative.	Average.	Relative.
1890-1899 . . .	\$0.4564	100.0	\$14.8042	100.0	.....	.....	.....	.....
1890 . . . . .	.6143	134.6	18.4083	124.3	.....	.....	.....	.....
1891 . . . . .	.5820	127.5	17.5208	118.4	.....	.....	.....	.....
1892 . . . . .	.5276	115.6	15.7492	106.4	.....	.....	.....	.....
1893 . . . . .	.4620	101.2	14.5167	98.1	.....	.....	.....	.....
1894 . . . . .	.3542	77.6	12.6642	85.5	.....	.....	.....	.....
1895 . . . . .	.3280	71.9	13.1033	88.5	.....	.....	.....	.....
1896 . . . . .	.3186	69.8	12.9550	87.5	.....	.....	.....	.....
1897 . . . . .	.3999	87.6	12.1008	81.7	.....	.....	.....	.....
1898 . . . . .	.4805	105.3	11.6608	78.8	.....	.....	.....	.....
1899 . . . . .	.4966	108.8	19.3633	130.8	.....	.....	.....	.....
1900 . . . . .	.5296	116.0	19.9800	135.0	.....	.....	.....	.....
1901 . . . . .	.4315	94.5	15.8683	107.2	.....	.....	.....	.....
1902 . . . . .	.4436	97.2	22.1933	149.9	.....	.....	.....	.....
1903 . . . . .	.4658	102.1	19.9158	134.5	.....	.....	.....	.....
1904 . . . . .	.4869	106.7	15.5725	105.2	.....	.....	.....	.....
1905 . . . . .	.5348	117.2	17.8850	120.8	.....	.....	.....	.....
1906 . . . . .	.5125	112.3	20.9825	141.7	.....	.....	.....	.....
1907 . . . . .	.5158	113.0	23.8950	161.4	.....	.....	.....	.....
1908 . . . . .	.4899	107.3	17.7000	119.6	.....	.....	.....	.....
1909 . . . . .	.5429	119.0	17.8058	120.3	.....	.....	.....	.....
1910 . . . . .	.4884	107.0	17.3617	117.3	.....	.....	.....	.....
1911 . . . . .	.4490	98.4	15.7125	106.1	.....	.....	.....	.....
1912 . . . . .	.4792	105.0	16.5575	111.8	.....	.....	.....	.....
1913 . . . . .	.4710	103.2	17.0675	115.3	.....	.....	\$2.200	.....
1914 . . . . .	.4398	96.4	12.8733	100.9	\$35.840	.....	2.200	.....
1915 . . . . .	.5714	125.2	13.7408	107.7	38.976	.....	2.200	.....
1916 . . . . .	.680	149.0	a19.760	133.5	73.248	.....	2.675	.....
d1917 . . . . .	.957	209.7	a36.892	249.2	97.731	.....	4.833	.....

a—Basic pig iron.

d—January-March, 1917.

## 2.—INDEX NUMBERS OF THE UNITED STATES BUREAU OF LABOR STATISTICS.<sup>4</sup>

### PUBLICATION.

"An index number is published in connection with the reports on wholesale prices issued by the Bureau of Labor Statistics of the United States Department of Labor at Washington. These reports are issued in bulletin form and appear annually.

### HISTORY.

"The publication of this index number was begun in 1902. Prior to that time the Department of Labor, now the Bureau of Labor Statistics, had conducted an inquiry into the course of wholesale prices from 1890 to 1899, the results of which were published in March, 1900.<sup>1</sup> The purpose of this inquiry was to continue, so far as practicable, the investigation made for the Senate Committee on Finance for the years 1840 to 1891 under the direction of Roland P. Falkner, statistician to the committee.<sup>2</sup> In the report of the Department of Labor alluded to, the index numbers appearing in the Senate Finance Committee's report were brought down to 1899, important changes with respect to the base period and the method of weighting being adopted. In 1902, however, when the material for the new report on wholesale prices was being assembled, it was found that many articles included in the report of the Senate Committee on Finance were either no longer manufactured or had ceased to be important factors in the market. On the other hand, a number of articles not shown in that report had become of such importance as to render necessary their inclusion in the new report. These facts necessitated the computation of a new series of index numbers based on the revised list of commodities. It was found, however, that prices of such commodities could be obtained for a period dating back to 1890, so that the new series of index numbers, as published in the 1902 report,<sup>3</sup> covered the 12 years from 1890 to 1901, inclusive. This series has been continued in subsequent wholesale-price reports.

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<sup>1</sup> Bulletin of the Department of Labor, No. 27.

<sup>2</sup> Report from the Committee on Finance of the United States Senate on Wholesale Prices, Wages, and Transportation. March 3, 1893. 52d Congress, 2d session, Report No. 1394.

<sup>3</sup> Bulletin of the Department of Labor, No. 39, March, 1902.

<sup>4</sup> In July, 1915, the U. S. Department of Labor Bureau of Labor Statistics published a Bulletin (Wholesale Price Series Number 3), entitled Index Numbers of Wholesale Prices in the United States and Foreign Countries. Extracts, descriptive of the methods of compiling the various index numbers, have been taken from this Bulletin and are reprinted in the following pages. The Index Numbers themselves have been brought up to date by additional research and investigation.

## SOURCE OF QUOTATIONS.

"The commodities included in the reports have been selected, not only with regard to their representative character, but also with regard to their availability in the future in the continuation of the price record. Standard trade journals, reports of boards of trade, chambers of commerce, produce exchanges, and leading manufacturers or their selling agents are the usual sources from which the price quotations are obtained. It has been the aim to secure the quotations for the various commodities from their primary markets. At present about one-half of the quoted prices are those in the New York market. For grains, live stock, etc., Chicago prices are quoted; for fish, New York and Boston prices; for pig iron, Pittsburgh prices; for tar, Wilmington, N. C., prices; etc. The prices for textiles are those prevailing in the general distributing markets, such as New York, Boston, and Philadelphia; and where no market is mentioned it should be understood that the prices are for the general market.<sup>1</sup>

## BASE PERIOD.

"In the compilation of the bureau's index numbers it was recognized that in reducing a series of actual prices to relative prices a base must first be chosen that represents, approximately at least, prices when business conditions are normal. This may be either a single quotation, the average price for one year, or the average for two or more years. If the price for a single year is chosen, it is essential that the year be a normal one, for if prices are high in the year chosen for the base any subsequent fall will be unduly magnified, while on the other hand, if prices are low any subsequent rise will be unduly magnified. For the reason that all commodities probably never present a normal condition as regards prices in any one year, it was decided that an average price for a number of years would better reflect average conditions and form a broader and more satisfactory base than would the price for any single year. The period chosen as this base was that from 1890 to 1899—a period of 10 years. In the cases of a few articles for which prices for the entire 10-year period could not be obtained, the average for such years prior to 1899 as were available was chosen as the base.

"The relative prices included in the series have been calculated in the usual manner and represent the percentage which each monthly or yearly price is of the average price for the base period 1890-1899. The average price of every article for the base period is represented by 100, and the relative prices for each month or year show the percentage of rise and fall, from month to month or from year to year, of the prices of each single commodity, of each group of commodities, and of all commodities in terms of the average prices in 1890-1899. \* \* \* \*

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<sup>1</sup> Bulletin of the United States Bureau of Labor Statistics, No. 149, p. 27.



## NUMBER AND CLASS OF COMMODITIES.

"In the record of prices from 1890 to 1913, 234 series of quotations have been presented for the entire period and an additional 38 for some portion of the period. The number of commodities included in the report for 1913 was 252, classified as follows: Farm products, 20 articles; food, etc., 54 articles; cloths and clothing, 63 articles; fuel and lighting, 13 articles; metals and implements, 38 articles; lumber and building materials, 28 articles; drugs and chemicals, 9 articles; house-furnishing goods, 14 articles; and miscellaneous, 13 articles. It was recognized by the bureau that, in the computation of an index number of this character, it is important that the greatest care be exercised in the choice of commodities, in order that a simple average of their relative prices shall show a general price level, and it has been the aim to select only important and representative articles in each group. The use of a large number of articles, carefully selected, minimizes the effect on the general price level of an unusual change in the price of any one article or of a few articles. \* \* \* \* \*

The following table contains index numbers of wholesale prices, by years, from 1890 to 1917. The average price for the year 1916, is taken as the base or 100 in this table instead of the period 1890-1899.



INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES,  
1890 TO SEPTEMBER, 1917.

[1916=100.]

Year or month.	Farm prod- ucts.	Food, etc.	Cloths and cloth- ing.	Fuel and light- ing.	Metals and metal prod- ucts	Lum- ber and build- ing mate- rials.	Drugs and chemi- cals.	House fur- nish- ing goods.	Miscel- laneous.	All com- modi- ties.
1890.....	56	70	73	59	77	71	63	109	76	66
1891.....	60	70	71	59	68	69	65	108	76	66
1892.....	54	63	70	56	63	66	64	106	73	61
1893.....	55	69	70	56	57	67	63	106	75	63
1894.....	48	60	62	52	48	65	58	105	71	56
1895.....	49	58	61	59	52	64	62	99	68	57
1896.....	44	53	59	59	54	62	64	97	66	54
1897.....	48	56	60	52	48	61	62	90	67	54
1898.....	50	60	62	53	48	64	65	96	66	56
1899.....	50	59	65	61	73	70	67	95	68	60
1900.....	56	62	70	70	71	75	68	101	75	65
1901.....	59	63	65	68	66	72	69	112	74	64
1902.....	66	67	66	80	66	76	68	112	76	69
1903.....	62	64	70	92	65	79	67	111	78	69
1904.....	66	68	70	79	60	80	68	106	78	70
1905.....	53	68	72	75	66	84	67	99	78	69
1906.....	64	66	77	78	76	93	66	99	80	72
1907.....	70	70	82	81	81	96	67	99	84	76
1908.....	69	74	75	78	63	91	70	95	80	74
1909.....	79	78	78	76	62	96	71	96	90	79
1910.....	84	79	79	72	63	100	72	94	96	81
1911.....	76	78	76	70	60	100	72	90	86	77
1912.....	82	85	78	77	67	98	71	90	84	82
1913.....	82	79	79	87	67	99	70	91	83	81
1914.....	85	81	78	80	59	96	72	94	81	80
1915.....	86	83	78	75	65	93	80	92	81	81
1916.....	100	100	100	100	100	100	100	100	100	100
1916.										
January.....	89	90	87	88	85	98	98	95	89	89
February.....	89	90	89	89	89	99	101	95	88	90
March.....	91	91	92	90	95	100	103	95	91	92
April.....	93	93	94	91	99	100	105	99	92	94
May.....	95	94	96	90	102	101	107	99	95	96
June.....	95	94	97	91	101	100	105	99	100	96
July.....	96	96	99	91	98	98	100	101	101	97
August.....	103	101	100	92	98	99	92	101	103	100
September.....	107	106	103	96	100	99	92	101	105	103
October.....	111	111	108	111	102	100	95	104	110	108
November.....	118	119	114	130	108	103	99	104	112	116
December.....	116	115	122	141	125	105	100	104	113	118
1917.										
January.....	120	119	127	147	123	105	101	116	114	122
February.....	123	127	127	154	128	107	103	117	115	126
March.....	132	127	128	157	134	109	106	117	116	130
April.....	147	144	132	154	140	113	109	137	120	139
May.....	160	151	136	162	146	116	115	137	122	147
June.....	160	148	140	167	161	126	116	148	126	130
July.....	162	142	145	168	173	130	130	150	130	151
August.....	167	142	150	152	168	131	139	150	131	151
September.....	166	141	149	149	154	133	143	150	133	149

### 3.—INDEX NUMBERS OF THE ANNALIST.

#### PUBLICATION.

"The Annalist, a magazine of finance, commerce, and economics, published weekly in New York City, has compiled an index number based on the wholesale prices of 25 food commodities in the United States. These articles are so selected as to represent a theoretical family food budget.

#### HISTORY.

"The publication of this index number began with the first issue of the Annalist on January 20, 1913, and has been continued weekly since that date in connection with the exhibit of various other items of business activity appearing under the caption of 'Barometrics.'

#### SOURCE OF QUOTATIONS.

"The prices used in the computation of the index number are those prevailing in the New York and Chicago markets.

#### BASE PERIOD.

"The 10 years, 1890-1899, constitute the base period used in computing the index number.

#### PRICES: HOW SHOWN AND COMPUTED.

"During the period from May 19 to September 1, 1913, the Annalist published in each week's issue the mean price of each selected commodity during the preceding week, together with the relation of such price to the price for the base period, 1890-1899. The sum of these relative prices, divided by 25 (the number of commodities), constitutes the index number for the week. In all other issues of the Annalist up to date no exhibit of wholesale prices is made in connection with the presentation of the index number.

#### NUMBER AND CLASS OF COMMODITIES.

"As previously stated, 25 articles of food are included in the index. These are listed in the Annalist of May 19, 1913, and in subsequent numbers to September 1, of the same year, as follows:

Steers.	Flour, wheat, spring.
Hogs.	Flour, wheat, winter.
Sheep.	Corn meal.
Beef, fresh.	Rice.
Mutton, dressed.	Oats.
Beef, salt.	Apples, evaporated.
Pork, salt.	Prunes.
Bacon.	Butter, creamery.
Codfish, salt.	Butter, dairy.
Lard.	Cheese.
Potatoes.	Coffee.
Beans.	Sugar, granulated.
Flour, rye.	

## DESCRIPTION AND GROUPING OF COMMODITIES.

"The following description of the commodities included in the index number has been supplied by the publishers of the Annalist:

## NEW YORK MARKETS.

Codfish (Georges), corn meal, rice, beans, evaporated apples, California prunes, extra creamery butter, New York State dairy butter, cheese (New York State, whole milk, held), No. 7 Rio coffee, fine granulated sugar, fresh beef, dressed mutton, salt beef, salt pork, wheat flour (winter straights and spring patents), Middle West lard, and rye flour.

\* \* \* \* \*

## CHICAGO MARKETS.

Good to choice steers, hogs (250-300 pound packers and fair to select butcher's), sheep (good to choice wethers), bacon (short, clear sides), white potatoes, and cash oats (2 white, 3 white, and standards).

\* \* \* \* \*

## WEIGHTING.

"The index number is unweighted and is obtained by computing the simple arithmetic mean of the relative prices of the different commodities."

## TABLE OF RESULTS.

The course of the index number by years from 1890 to 1917 is shown in the following statement.

## INDEX NUMBERS, BY YEARS, 1890-1917.

[Base period, 1890-1899=100.]

Yearly.

Year.	Index number.	Year.	Index number.	Year.	Index number.
1890.....	109.252	1899.....	93.348	1908.....	125.756
1891.....	119.488	1900.....	99.388	1909.....	133.952
1892.....	108.624	1901.....	104.656	1910.....	137.172
1893.....	116.100	1902.....	116.264	1911.....	131.068
1894.....	102.076	1903.....	107.516	1912.....	143.254
1895.....	94.604	1904.....	108.664	1913.....	139.980
1896.....	80.096	1905.....	110.652	1914.....	146.069
1897.....	84.092	1906.....	114.364	1915.....	148.055
1898.....	92.208	1907.....	117.940	1916.....	175.720
				1917 (to Dec. 10)....	260.285

## 4.—INDEX NUMBERS OF BRADSTREET'S.

## PUBLICATION.

"This 'index' represents the record of wholesale prices of staple articles in the primary markets of the United States and is now published every month. Formerly it was issued only every quarter.

## HISTORY.

"Bradstreet's index had its beginning in the issue of September 21, 1895, of the periodical of that name, which presented a table of comparative prices of 110 staple articles for each quarter from October 1, 1890, to July 1, 1895, under the heading, 'Five years' prices for 110 staple products.'

"The compiler evidently had in mind a record of price movements in the United States similar to that furnished by Sauerbeck's index of English prices, as he refers to it in the introductory paragraph as follows:

\* \* \* \* \*

"The comparative prices continued to be presented on the first of each quarter until May 8, 1897, when in connection with 'A study of prices' an index number was published for the first time.

"The index as constructed was simply the sum obtained by adding the per pound prices of the different articles included. At first it was not expressed in dollars and cents, but as an abstract number. No attempt was made at weighting, nor was consumption taken into account, so that the result was 'not an absolute indication of the price movement based on the proportions in which each of the products and articles are used, but a fair indication of the tendency.' The author stated that only 97 articles were included in the index, but as actual prices were shown for 108 articles and only 10 articles were stated to be excluded it would appear that the index comprised 98 articles.

"In the issue of June 11, 1898, actual prices were shown for 107 articles, quotations for onions being dropped, and the index number was revised to exclude the price of quicksilver. \* \* \* \* \*

"Again on September 10, 1898, the index appeared with revised figures. This revision was due to the quotation of a different grade of hides. \* \* \* \* \*

"In the issue of October 12, 1901, the first group indexes were shown and consisted of the sum of the per pound prices for all of the articles included in the group. The sum of the 13 groups was the index shown for all commodities. The general index was expressed in dollars and cents and continued to be stated this way until April 9, 1904, when it was restated in dollars, cents, and fractions thereof. This was not a revision of the index, but simply a change in the method of pointing off. The index numbers for the groups had been expressed in this way for some time before this date. The index now began with January 1, 1892, instead of October 1, 1890, as formerly, and was computed upon the basis of the revision of September, 1898, until December 16, 1905, when a general index 'revised to exclude some staples showing wide fluctua-



tions' in price was published. It is not stated in connection with these figures what articles were excluded or on how many commodities the revised index number was based. The exhibit as published contained the index number by quarters from January 1, 1892, to October 1, 1898, and by months from January 1, 1899, to December 1, 1905, inclusive. No further revision of the index number appears to have been made.

#### SOURCE OF QUOTATIONS.

"The source of these quotations is not disclosed, but it is stated that they are from primary markets.

#### BASE PERIOD.

"No base period was selected in the compilation of the index number, the need of such being obviated by the method employed, which consists simply in adding together the prices per pound of the various selected articles at the date named.

#### PRICES: HOW SHOWN AND COMPUTED.

"Prices are published each month for a selected list of representative commodities. These prices are shown for the first day of the current month and, for purpose of comparison, the first day of several preceding months and the first day of the corresponding month in the preceding year. No range of quotations is shown in any case, and it is evident that a single price has been used, but whether either extreme or the mean was taken it is impossible to determine with the source of quotations unknown. No yearly average actual prices are published. \* \* \* \* \*

#### NUMBER AND CLASS OF COMMODITIES.

"In the beginning 110 articles were shown in the comparative table of actual prices, but now only 106 are included, and of these only 96 are included in the index. Oranges, naphtha, onions, and aluminum were the articles dropped from the table of comparative prices, but the reason for their discontinuance is not given. Two of these, onions and aluminum, were never included in the compilation of the index. Two articles that at first were included in the index are no longer included—namely, quicksilver and rubber—but these are still shown in the table of actual prices. When these articles were dropped the index was recomputed from that date to the beginning, necessitating a new index figure for every previous date. The list of articles includes both raw and manufactured commodities that are of general consumption in the United States.

#### DESCRIPTION AND GROUPING OF COMMODITIES.

"The articles on which the index is based are divided into 13 general groups, as follows: Breadstuffs, live stock, provisions and groceries, fresh and dried fruits, hides and leather, raw and manufactured textiles, metals, coal and coke, mineral and vegetable oils, naval stores, building materials, chemicals and drugs, and miscellaneous. Since October 12, 1901, an index has been computed usually for each of the different groups separately. The sum of the indexes for the 13 groups is the index for the whole number of articles. Index numbers for years are computed by averaging the 12 monthly totals. \* \* \* \* \*



## WEIGHTING.

"Apart from the basic plan of expressing in terms of dollars and cents the value of 1 pound avoirdupois of each commodity, there is no attempt at assigning varying degrees of importance to the different articles included in the index.

"For some years past a yearly index has been computed by averaging the 12 monthly indexes. The manner of presenting this information is shown by the following table, which is reproduced from Bradstreet's of January 6, 1917:

1916.....	\$11.8251	1903.....	\$7.9364
1915.....	9.8530	1902.....	7.8759
1914.....	8.9034	1901.....	7.5746
1913.....	9.2076	1900.....	7.8839
1912.....	9.1867	1899.....	7.2100
1911.....	8.7132	1898.....	6.5713
1910.....	8.9881	1897.....	6.1159
1909.....	8.5153	1896.....	5.9124
1908.....	8.0094	1895.....	6.4346
1907.....	8.9045	1894.....	6.6846
1906.....	8.4176	1893.....	7.5324
1905.....	8.0987	1892.....	7.7769
1904.....	7.9187		

Ten-year average, 1902-1911, inclusive, \$8.3377.

Ten-year average, 1892-1901, inclusive, \$6.9696.

The index numbers computed from the wholesale prices of 96 articles on the first day of each month from January, 1903, to December, 1917, inclusive, are shown in the subjoined table.

BRADSTREET'S INDEX NUMBERS, JANUARY, 1903, TO DECEMBER, 1917, INCLUSIVE.

Year	Index number: First of each month.											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1903.	\$8.0789	\$8.0824	\$8.1300	\$8.1247	\$7.9567	\$7.8751	\$7.8706	\$7.7473	\$7.7583	\$7.9083	\$7.8671	\$7.8383
1904.	7.9885	8.0973	8.0882	7.9690	7.9352	7.9877	7.6318	7.7623	7.7845	7.9213	8.0015	8.0579
1905.	8.0827	8.0805	8.0979	7.9996	7.9700	7.9073	7.9160	8.1111	8.2795	8.2298	8.2097	8.3014
1906.	8.3289	8.2415	8.2321	8.2987	8.3054	8.3203	8.2835	8.3376	8.4528	8.5580	8.7509	8.9023
1907.	8.9172	8.9953	8.1293	8.9640	8.9356	8.9901	9.0409	8.9304	8.8297	8.8506	8.7468	8.5246
1908.	8.2949	8.1289	7.9862	8.0650	7.9629	7.7227	7.8224	7.9328	7.9051	8.0139	8.0674	8.2133
1909.	8.2631	8.3022	8.2167	8.3157	8.3016	8.3960	8.4573	8.5039	8.5906	8.7478	8.9635	9.1262
1910.	9.2310	9.0730	9.1113	9.1996	9.0385	8.9105	8.9246	8.8222	8.9519	8.9267	8.8841	8.7844
1911.	8.8361	8.7662	8.6929	8.5223	8.4586	8.5294	8.5935	8.6568	8.8191	8.8065	8.8922	8.9824
1912.	8.9493	8.9578	8.9019	9.0978	9.2696	9.1017	9.1119	9.1595	9.2157	9.4515	9.4781	9.5462
1913.	9.4935	9.4592	9.4052	9.2976	9.1394	9.0721	8.9521	9.0115	9.1006	9.1526	9.2252	9.2290
1914.	8.8857	8.8619	8.8320	8.7562	8.6224	8.6220	8.6566	8.7087	9.7572	9.2416	8.8620	9.0354
1915.	9.1431	9.6621	9.6197	9.7753	9.7978	9.7428	9.8698	9.9213	9.8034	9.9774	10.3768	10.6473
1916.	10.9163	11.1415	11.3760	11.7598	11.7485	11.6887	11.5294	11.4414	11.7803	12.0399	12.7992	13.6805
1917.	13.7277	13.9427	14.1360	14.5769	15.1203	15.4680	16.0680	16.3985	16.6441	16.9135	17.1701	17.8113

The following statement shows by groups of commodities the "Index Number" on the first day of January, November, and December, 1915 and 1916, and the first day of January, 1917.

	Jan. 1, 1915.	Nov. 1, 1915.	Dec. 1, 1915.	Jan. 1, 1916.
Breadstuffs.....	\$0.1193	\$0.1057	\$0.1089	\$0.1169
Live stock.....	.4170	.4230	.4085	.4120
Provisions.....	2.4075	2.3312	2.3992	2.4051
Fruits.....	.1614	.2520	.2545	.2537
Hides and leather.....	1.4600	1.5800	1.5925	1.5900
Textiles.....	2.1729	2.5273	2.6033	2.7074
Metals.....	.5807	.6749	.7446	.8449
Coal and coke.....	.0065	.0071	.0071	.0083
Oils.....	.3632	.3982	.4256	.4702
Naval stores.....	.0736	.0867	.0962	.0946
Building materials.....	.0821	.0840	.0894	.0930
Chemicals and drugs.....	1.0379	1.6320	1.6469	1.6519
Miscellaneous.....	.2610	.2747	.2706	.2683
Total.....	9.1431	10.3768	10.6473	10.9163

	Jan. 1, 1916.	Nov. 1, 1916.	Dec. 1, 1916.	Jan. 1, 1917.
Breadstuffs.....	\$0.1169	\$0.1632	\$0.1607	\$0.1648
Live stock.....	.4120	.4970	.5030	.5165
Provisions.....	2.4051	2.9491	3.0684	3.0826
Fruits.....	.2537	.3727	.3447	.3002
Hides and leather.....	1.5900	2.1650	2.5650	2.6250
Textiles.....	2.7074	3.4107	3.6236	3.6581
Metals.....	.8449	.9248	1.0331	.9855
Coal and coke.....	.0083	.0124	.0125	.0137
Oils.....	.4702	.5518	.5620	.5978
Naval stores.....	.0946	.0843	.0917	.0956
Building material.....	.0930	.1045	.1163	.1165
Chemicals and drugs.....	1.6519	1.2116	1.2166	1.1941
Miscellaneous.....	.2683	.3521	.3652	.3773
Total.....	10.9163	12.7992	13.6628	13.7277

## 5.—INDEX NUMBERS OF DUN.

### PUBLICATION.

"An 'index' number based on the wholesale prices of a large number of representative commodities in general use in the United States is published by the mercantile agency of R. G. Dun & Co., of New York City. The information appears monthly in Dun's Review, the weekly journal of finance and trade issued by the above-named company.

### HISTORY.

"The publication of this index number was begun in 1901 and covered a period of time extending back to 1860. From 1901 to 1907 periodical presentation of the index in Dun's Review appears to have been made. With the issue of May 11, 1907, however, its publication was discontinued and apparently was not resumed until May 9, 1914. The issue of the latter date contained data for the first five months of the years 1912, 1913, and 1914, respectively, but no attempt was made in this number to supply figures for all of the period intervening since 1907. Data for other months of 1912, 1913, and 1914 are shown in subsequent issues; and in Dun's Review of January 9, 1915, a presentation is made of the index number on the first of each month for the entire period from 1907 to 1914, inclusive, thus furnishing a continuous series since the inception of the undertaking.

### SOURCE OF QUOTATIONS.

"The price quotations on which the index number is based are those gathered by Dun & Co. in the principal markets of the country, New York and Chicago prices predominating.

### BASE PERIOD.

"Under the method followed in the computation of the index number no base period is employed, the index in the case of each article and group being the actual amount in dollars and cents required to purchase a year's supply for a single individual at the date named.

### PRICES: HOW SHOWN AND COMPUTED.

"With regard to the method of calculation, the following statement is reproduced from Dun's Review of May 9, 1914:

"Quotations of all the necessities of life are taken and in each case the price is multiplied by the annual per capita consumption, which precludes any one commodity having more than its proper weight in the aggregate. Thus, wide fluctuations in the price of an article little used do not materially affect the 'index,' but changes in the great staples have a large influence in advancing or depressing the total. \* \* \* The per capita consumption used to multiply each of many hundreds of commodities does not change. There appears to be much confusion on this point, but it should be seen at a glance that there would be no accurate record of the course of prices if the ratio of consumption changed. It was possible, however, to obtain figures sufficiently accurate to give each commodity its proper importance in the compilation. This was done by taking averages for a period of years when business conditions were normal and every available trade record was utilized, in addition to official statistics of agriculture, foreign commerce, and census returns of manufactures.'

### NUMBER AND CLASS OF COMMODITIES.

"The following excerpt from the same source shows what commodities are included:

"For convenience of comparison and economy of space the prices are grouped into seven classes: Breadstuffs include quotations of wheat, corn, oats, rye, barley, beans, and peas; meats include live hogs, beef, sheep, and many provisions, lard, tallow, etc.; dairy and garden products embrace eggs, vegetables, fruits, milk, butter, cheese, etc.; other foods include fish, liquors, condiments, sugar, rice, also tobacco, etc.; clothing covers the raw material of each industry, as well as quotations for woolen, cotton, silk, and rubber goods, also hides, leather and boots and shoes; metals include various quotations for pig iron and partially manufactured and finished products, as well as the minor metals, tin, lead, copper, etc., and coal and petroleum; miscellaneous includes many grades of hard and soft lumber, lath, brick, lime, glass, turpentine, hemp, linseed oil, paints, fertilizers, and drugs.

"The precise number of articles included in the index is not stated; but in Dun's Review of January 9, 1915, it is said that 'about 200 products are taken.'

## DESCRIPTION AND GROUPING OF COMMODITIES.

"As previously stated, the commodities are divided into seven groups: viz., breadstuffs, meats, dairy and garden products, other foods, clothing, metals, and miscellaneous articles. No further description of the articles entering into the index is given." \* \* \* \* \*

## TABLE OF RESULTS.

The following statistics, showing the trend of wholesale prices from January 1, 1860, to December 1, 1917, have been compiled from Dun's Review.

## WHOLESALE PRICES OF SPECIFIED COMMODITIES, JAN 1, 1860, TO DEC. 1, 1914.

Date.	Breadstuffs.	Meats.	Dairy and garden products.	Other foods.	Clothing.	Metals.	Miscellaneous.	Total.
1860, Jan. 1.....	\$23.652	\$10.084	\$14.169	\$ 8.978	\$22.094	\$26.082	\$16.572	\$121.631
1864, Sept. 1.....	46.138	17.789	29.426	29.562	91.667	61.964	36.191	312.737
1870, Jan. 1.....	29.076	15.255	21.178	16.240	32.986	27.682	23.056	165.473
1875, Jan. 1.....	26.048	11.932	17.832	14.546	25.718	22.833	18.669	137.578
1880, Jan. 1.....	22.955	9.206	14.007	11.873	22.673	25.002	16.963	122.679
1885, Jan. 1.....	16.342	9.432	14.304	8.996	18.081	15.065	14.245	96.465
1888, Jan. 1.....	18.565	8.920	15.030	10.340	15.140	17.330	14.577	99.902
1889, Jan. 1.....	18.195	8.705	14.670	10.480	15.170	17.360	14.496	99.076
1890, Jan. 1.....	13.765	7.620	12.675	9.935	14.845	16.240	15.111	90.191
1891, Jan. 1.....	19.725	7.810	16.270	10.215	14.135	15.875	14.217	98.247
1892, Jan. 1.....	17.700	7.895	13.180	9.185	13.430	14.665	23.767	89.822
1893, Jan. 1.....	15.750	9.315	15.290	9.595	13.900	15.985	14.320	94.155
1894, Jan. 1.....	13.530	8.655	13.945	8.945	12.880	14.565	13.512	86.032
1895, Jan. 1.....	14.311	8.359	12.196	8.607	11.886	12.026	13.607	80.992
1896, Jan. 1.....	11.380	7.540	10.969	8.898	12.787	12.803	13.403	77.780
1897, Jan. 1.....	11.729	7.327	10.456	8.170	12.407	13.014	12.399	75.502
1897, July 1 (low)....	10.587	7.529	8.714	7.887	13.868	11.642	12.288	72.455
1898, Jan. 1.....	13.511	7.336	12.371	8.312	14.654	11.572	12.184	79.940
1899, Jan. 1.....	13.816	7.520	11.458	9.096	14.150	11.843	12.540	80.423
1900, Jan. 1.....	13.254	7.258	13.702	9.200	17.484	18.085	16.312	95.295
1901, Jan. 1.....	14.486	8.407	15.556	9.504	16.024	15.810	15.881	95.668
1902, Jan. 1.....	20.002	9.670	15.248	8.952	15.547	15.375	16.793	101.587
1903, Jan. 1.....	17.104	9.522	14.613	9.418	15.938	17.185	16.576	100.356
1904, Jan. 1.....	17.102	8.138	15.287	9.653	17.316	15.887	16.759	100.142
1905, Jan. 1.....	18.278	7.950	13.948	10.699	16.319	16.188	16.936	100.318
1906, Jan. 1.....	16.554	8.426	14.399	9.822	19.313	17.141	18.809	104.464
1907, Jan. 1.....	16.079	9.350	14.965	9.760	19.637	18.087	19.386	107.264
Feb. 1.....	16.389	9.693	14.411	9.804	19.798	18.162	19.109	107.366
Mar. 1.....	17.478	9.673	15.727	9.767	20.000	18.135	19.133	109.913
Apr. 1.....	16.982	9.629	14.792	9.817	19.997	17.372	19.305	107.895
May 1.....	18.165	9.641	14.461	9.824	20.098	17.524	19.242	108.955
June 1.....	20.089	9.982	15.417	10.100	20.252	17.689	20.125	113.654
July 1.....	20.306	10.196	14.767	10.013	20.355	17.688	20.335	113.660
Aug. 1.....	19.872	10.090	15.458	10.041	20.281	17.667	20.319	113.728
Sept. 1.....	22.483	10.150	15.019	10.180	20.529	17.626	20.086	116.073
Oct. 1.....	22.940	9.667	15.646	10.446	20.169	17.296	19.976	116.140
Nov. 1.....	21.987	9.229	15.840	9.629	19.933	17.179	19.836	113.633
Dec. 1.....	21.290	8.929	17.169	10.152	19.389	16.937	19.406	113.272
1908, Jan. 1.....	22.254	8.146	17.380	10.236	18.849	17.232	19.185	113.282
Feb. 1.....	21.120	8.246	15.643	10.384	18.313	16.944	19.264	109.910
Mar. 1.....	21.480	8.546	15.904	10.354	17.731	17.122	19.252	110.389
Apr. 1.....	22.032	9.221	14.369	10.501	17.200	17.176	18.229	108.728
May 1.....	22.882	9.777	14.303	10.397	16.804	16.872	19.150	110.185
June 1.....	23.163	9.620	13.114	10.314	16.919	16.659	18.198	107.987

<sup>1</sup> The issue of May 9, 1914, contains the statement that "Dun's index number does not propose to show the cost of living, because wholesale prices are taken and all luxuries omitted. Its economic value lies in showing the percentage of advance or decline from month to month."



WHOLESALE PRICES OF SPECIFIED COMMODITIES, JAN. 1, 1860, TO DEC. 1, 1914—  
Continued.

Date.	Bread- stuffs.	Meats.	Dairy and garden prod- ucts.	Other foods.	Cloth- ing.	Metals.	Miscella- neous.	Total.
1908, July 1.....	\$22.826	\$10.197	\$12.552	\$10.465	\$17.233	\$16.542	\$18.359	\$108.174
Aug. 1.....	24.161	9.992	13.357	10.349	17.348	16.537	17.751	109.495
Sept. 1.....	24.176	9.488	13.924	10.090	17.325	16.720	17.608	109.331
Oct. 1.....	23.990	9.534	14.620	10.090	17.226	16.821	17.710	109.991
Nov. 1.....	23.579	9.175	15.016	10.314	17.308	16.788	17.734	109.914
Dec. 1.....	21.879	9.135	17.019	10.428	17.828	16.920	17.781	111.008
1909, Jan. 1.....	21.480	9.142	18.104	10.396	18.024	16.919	17.783	111.848
Feb. 1.....	22.900	10.277	15.645	10.506	18.277	16.935	18.914	113.454
Mar. 1.....	23.967	8.860	15.212	10.417	18.893	16.652	21.419	115.420
Apr. 1.....	24.129	9.247	16.142	10.680	18.633	16.388	21.635	116.864
May 1.....	25.696	9.022	15.705	10.620	19.078	16.353	21.789	118.263
June 1.....	26.781	9.498	16.053	10.650	19.587	16.453	22.003	121.025
July 1.....	25.854	9.955	15.268	10.628	20.062	16.426	20.828	119.021
Aug. 1.....	23.705	9.617	15.767	10.810	20.924	16.615	20.582	118.020
Sept. 1.....	22.002	9.540	16.014	10.740	21.061	16.948	20.656	116.961
Oct. 1.....	21.530	9.450	16.265	10.975	21.528	17.200	21.362	118.301
Nov. 1.....	21.638	9.351	17.508	11.073	22.145	17.304	21.751	120.770
Dec. 1.....	22.315	9.546	19.164	11.052	22.130	17.437	21.770	123.414
1910, Jan. 1.....	23.830	9.642	18.906	10.803	20.635	17.496	22.122	123.434
Feb. 1.....	23.509	9.683	17.564	10.810	21.671	17.419	21.743	122.399
Mar. 1.....	23.423	10.786	16.927	10.906	21.785	17.265	21.748	122.840
Apr. 1.....	22.172	12.359	15.237	10.778	22.061	17.132	21.816	121.555
May 1.....	20.992	11.542	14.321	10.515	22.194	16.937	21.806	118.307
June 1.....	20.590	11.692	14.325	10.549	21.281	16.894	21.910	117.241
July 1.....	21.690	11.406	14.663	10.556	21.173	16.744	22.936	119.168
Aug. 1.....	21.863	11.080	15.457	10.830	20.508	16.587	22.171	118.524
Sept. 1.....	20.263	11.029	15.738	11.037	20.556	16.652	22.156	117.431
Oct. 1.....	19.120	10.370	16.234	11.038	19.932	16.574	22.181	115.449
Nov. 1.....	18.830	9.897	16.810	10.866	19.896	16.144	22.180	114.623
Dec. 1.....	18.567	9.788	18.013	10.509	20.042	16.092	21.653	114.664
1911, Jan. 1.....	18.010	9.483	18.073	11.196	19.644	16.519	22.177	115.102
Feb. 1.....	18.175	9.963	16.468	11.258	19.596	16.591	22.201	114.252
Mar. 1.....	17.762	10.146	14.588	11.018	19.789	16.742	22.243	112.288
Apr. 1.....	18.176	9.742	13.634	11.078	19.355	16.718	22.225	110.928
May 1.....	19.973	9.363	14.759	11.283	20.021	16.694	22.166	114.259
June 1.....	20.508	9.638	14.701	10.981	18.845	16.617	22.083	113.373
July 1.....	21.283	9.414	17.473	11.384	19.324	16.583	22.669	118.130
Aug. 1.....	21.695	9.900	19.248	11.604	18.778	16.526	22.024	119.775
Sept. 1.....	22.145	10.080	18.001	12.055	18.509	16.502	22.040	119.332
Oct. 1.....	23.828	9.612	16.501	12.339	18.638	16.307	22.067	119.292
Nov. 1.....	24.864	9.218	19.190	12.597	18.191	16.294	21.616	121.970
Dec. 1.....	23.125	8.924	22.177	12.610	18.191	16.361	21.534	122.922
1912, Jan. 1.....	23.523	8.920	21.286	12.261	18.630	16.371	22.437	123.438
Feb. 1.....	24.278	9.173	21.898	12.237	19.048	16.356	22.435	125.425
Mar. 1.....	24.718	9.514	19.364	12.222	19.493	15.961	22.255	123.527
Apr. 1.....	25.590	10.590	21.774	12.323	19.868	15.550	22.354	128.049
May 1.....	27.637	11.283	20.776	11.753	19.979	15.918	21.640	128.986
June 1.....	27.391	11.016	18.087	11.976	20.003	16.104	21.411	125.988
July 1.....	25.964	10.715	15.501	11.828	20.449	16.349	21.471	122.277
Aug. 1.....	25.760	10.848	16.752	11.705	20.588	16.664	21.575	123.892
Sept. 1.....	24.088	11.186	16.491	11.590	20.703	17.022	21.465	122.545
Oct. 1.....	21.765	10.923	18.627	11.757	20.705	17.633	21.696	123.106
Nov. 1.....	22.371	10.457	19.416	11.103	20.789	18.029	21.360	123.525
Dec. 1.....	20.665	10.629	19.223	11.112	21.066	18.046	21.313	122.054
1913, Jan. 1.....	19.883	10.912	17.925	11.073	21.015	17.942	22.082	120.832
Feb. 1.....	19.565	11.522	16.651	10.877	20.835	17.850	22.428	119.728
Mar. 1.....	19.596	13.047	16.142	10.732	21.143	17.379	22.422	120.461
Apr. 1.....	19.966	13.478	15.319	10.165	20.938	16.924	22.427	119.217
May 1.....	20.673	13.183	15.112	10.120	20.807	16.753	21.676	118.324
June 1.....	21.277	12.963	16.525	10.250	20.705	16.760	21.570	120.050
July 1.....	21.192	13.090	13.039	10.213	20.534	16.512	21.739	116.319
Aug. 1.....	21.632	13.080	14.916	10.267	20.250	16.528	21.842	118.515
Sept. 1.....	22.975	12.786	16.604	10.571	20.507	16.742	21.868	122.053
Oct. 1.....	22.586	13.053	17.934	10.700	20.947	16.760	21.922	123.902
Nov. 1.....	22.610	12.211	19.978	11.068	21.074	16.758	21.804	125.503
Dec. 1.....	23.006	12.059	20.454	11.010	20.815	16.596	21.794	125.734



WHOLESALE PRICES OF SPECIFIED COMMODITIES, JAN. 1, 1860, TO DEC. 1, 1914—  
Concluded.

Date.	Breadstuffs.	Meats.	Dairy and garden products.	Other foods.	Clothing.	Metals.	Miscellaneous.	Total.
1914, Jan. 1.....	\$21.961	\$12.150	\$20.087	\$10.950	\$20.664	\$16.170	\$22.546	\$124.528
Feb. 1.....	20.962	12.625	18.056	11.002	20.241	16.185	22.570	121.641
Mar. 1.....	22.146	13.168	16.009	11.361	20.434	15.881	22.772	121.771
Apr. 1.....	21.402	12.868	15.872	10.684	20.641	15.784	22.540	119.791
May 1.....	21.544	12.813	16.437	10.467	19.969	15.559	21.441	118.230
June 1.....	23.162	13.068	16.114	10.610	20.686	15.695	21.761	121.096
July 1.....	21.086	12.979	17.244	10.449	20.834	15.691	21.425	119.708
Aug. 1.....	22.567	13.427	16.201	10.284	20.975	15.764	21.522	120.740
Sept. 1.....	26.253	12.839	17.432	11.729	20.398	16.126	22.198	126.975
Oct. 1.....	24.441	12.093	17.326	11.423	20.259	15.974	22.015	123.531
Nov. 1.....	25.300	11.907	18.586	10.880	19.970	15.849	21.848	124.340
Dec. 1.....	24.426	11.324	19.825	10.548	19.883	16.134	22.043	124.183
1915, Jan. 1.....	25.891	10.705	19.289	10.602	19.724	16.163	21.794	124.168
Feb. 1.....	29.052	10.601	17.464	10.478	20.117	16.296	21.654	125.662
Mar. 1.....	28.606	10.731	15.580	10.822	20.221	16.343	21.855	124.158
Apr. 1.....	28.867	11.072	15.585	10.761	20.480	15.942	22.383	125.090
May 1.....	29.807	11.668	15.464	10.705	20.786	15.834	22.385	126.649
June 1.....	28.357	12.513	15.132	10.597	20.748	16.138	22.507	125.992
July 1.....	26.467	12.134	15.563	10.724	20.902	16.607	22.561	124.958
Aug. 1.....	25.999	11.388	16.030	10.970	21.400	16.616	22.676	125.079
Sept. 1.....	24.978	11.440	16.256	10.850	21.462	16.956	22.742	124.684
Oct. 1.....	23.540	11.469	18.769	10.717	21.926	17.065	23.177	126.663
Nov. 1.....	24.024	11.392	20.616	10.956	22.325	17.276	23.878	130.467
Dec. 1.....	25.164	10.551	20.971	11.224	22.808	18.328	24.100	133.146
1916, Jan. 1.....	27.318	11.494	20.509	11.212	23.420	18.893	24.820	137.666
Feb. 1.....	28.781	12.233	20.400	11.401	23.601	19.819	26.025	142.260
Mar. 1.....	26.278	13.222	20.812	11.527	23.783	20.387	26.101	142.110
Apr. 1.....	26.703	14.166	21.256	11.932	24.947	20.643	26.043	145.690
May 1.....	26.773	14.611	20.633	12.070	25.139	20.889	26.082	146.197
June 1.....	25.631	15.045	19.267	12.231	25.392	21.656	26.175	145.397
July 1.....	26.378	14.400	19.435	12.156	25.800	21.174	25.799	145.142
Aug. 1.....	28.660	13.655	17.366	12.016	25.899	21.057	25.277	143.930
Sept. 1.....	31.061	14.690	21.541	11.962	26.516	21.224	25.024	152.018
Oct. 1.....	31.821	13.691	20.702	12.616	26.826	21.326	25.373	152.355
Nov. 1.....	36.772	14.238	24.273	13.021	29.099	21.798	25.639	164.840
Dec. 1.....	36.090	14.248	25.403	12.923	30.234	23.390	25.802	168.090
1917, Jan. 1.....	36.152	15.020	25.167	12.928	30.082	24.451	25.762	169.562
Feb. 1.....	37.865	16.124	27.372	12.988	30.380	25.029	26.515	176.273
Mar. 1.....	40.955	17.031	31.509	13.166	30.389	25.977	27.217	186.244
Apr. 1.....	43.813	18.894	29.301	13.289	30.678	26.683	27.354	190.012
May 1.....	55.360	19.385	30.722	13.717	32.081	28.443	28.727	208.435
June 1.....	53.504	19.810	33.606	13.865	33.025	29.888	28.887	212.585
July 1.....	53.918	18.824	26.449	14.225	36.527	32.390	29.617	211.950
Aug. 1.....	64.071	17.746	21.247	15.213	36.917	32.575	31.010	218.779
Sept. 1.....	54.688	19.355	22.751	15.552	38.615	32.657	31.392	215.010
Oct. 1.....	55.518	19.127	25.802	16.086	39.436	31.159	32.551	219.679
Nov. 1.....	55.680	18.168	25.886	18.720	40.444	29.843	32.009	220.750
Dec. 1.....	53.996	19.008	27.021	18.767	40.745	28.413	32.222	220.172

NOTE.—Breadstuffs include quotations of wheat, corn, oats, rye and barley, besides beans and peas; meats include live hogs, beef, sheep and various provisions, lard, tallow, etc.; dairy and garden include butter, eggs, vegetables and fruits; other foods include fish, liquors, condiments, sugar, rice, tobacco, etc.; clothing includes the raw material of each industry, and many quotations of woolen, cotton and other textile goods, as well as hides and leather; metals include various quotations of pig iron, and partially manufactured and finished products, as well as minor metals, coal and petroleum. The miscellaneous class embraces many grades of hard and soft lumber, lath, brick, lime, glass, turpentine, hemp, linseed oil, paints, fertilizers and drugs.

## 6.—INDEX NUMBERS OF GIBSON.

### PUBLICATION.

"This index of wholesale prices in the United States is published by Thomas Gibson, New York, every Saturday, in his weekly market letter.

### HISTORY.

"In March, 1910, Prof. J. Pease Norton published a 'report on a new method of compiling index numbers on the Sauerbeck selection of commodities modified with the Dun system of weighting,' which was prepared for use in the weekly market report of Thomas Gibson.<sup>1</sup> The work was undertaken as a continuation of the Dun index, which had been suspended in May, 1907.

"In this compilation 50 articles, divided into four general groups, were used instead of the much larger number included in Dun's index. The general food group was in turn divided into vegetable foods and animal foods. The descriptions of the 50 articles whose prices formed the index were the same as those used for these 50 articles in Bulletin of the United States Bureau of Labor, No. 75. The actual and relative prices for 1907 of these 50 articles appear to have been taken from the latter source. The plan followed in the compilation of this index was intended to be that used by Sauerbeck. It is claimed that no manufactured or derivative products are included, but that only primary commodities have been used.

"Since November, 1912, only 22 articles, all of which belong to the food group alone, have been included in the index number. \* \* \* \* \*

### BASE PERIOD.

"The years 1890 to 1899 are used as the base period in the computation of the index number.

### PRICES: HOW SHOWN AND COMPUTED.

"The actual prices of the articles are not shown for any period, the only data published in Gibson's weekly market report being the index for all commodities.

### NUMBER AND CLASS OF COMMODITIES.

"As has been stated, when this index was first published it covered 50 articles from the farm, mines, and other sources, and included such as had been subjected only to an initial manufacturing process. Since November, 1912, it has been calculated on the food group alone, including 22 articles. It is stated that the articles covered are those essentially primary in their nature.

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<sup>1</sup>See also article by Prof. Norton in Quarterly Journal of Economics, August, 1910, pp. 750-759. Published by Harvard University, Cambridge, Mass.

## DESCRIPTION AND GROUPING OF COMMODITIES.

"The present list of articles is divided into two groups, as follows:

## Vegetable foods (13 articles).

Wheat, contract price.  
 Wheat flour, spring patents.  
 Wheat flour, winter patents.  
 Barley, by sample.  
 Oats, cash.  
 Corn, No. 2, cash.  
 Corn meal, fine yellow.  
 Potatoes, white.  
 Rye, No. 2.  
 Sugar, 89°, fair refining.  
 Sugar, 96°, centrifugal.  
 Coffee, Rio, No. 7.  
 Tea, Formosa, fine.

## Animal foods (9 articles).

Beef, steers (average of quotations for two grades).  
 Beef, fresh native sides.  
 Beef, salt.  
 Mutton, sheep (average of quotations for two grades).  
 Mutton, dressed.  
 Pork, hogs (average of quotations for two grades).  
 Bacon, short rib sides.  
 Hams.  
 Butter (average of quotations for three grades).

\* \* \* \* \*

## WEIGHTING.

"The weights assigned to the four groups formerly included in the index number were 50 for foods, 18 for textiles, 16 for minerals, and 16 for other commodities.

"The weighting was accomplished by using a combination of figures from Dun's report and the material published by the United States Bureau of Labor. \* \* \* \* \*

"Since the reduction of the number of articles on which the index number is calculated from 50 articles of all classes to 22 food commodities, no explanation has been given concerning the method of weighting employed, so far as can be ascertained. It is stated, however, in Gibson's weekly market letter of January 11, 1913, and in subsequent issues that the index number is weighted according to Dun's method.

## TABLES OF RESULTS.

The average yearly index numbers for the cost of foodstuffs, the only part of the original series now published, as computed by this process from 1890, down to the present time, are shown in the following tables appearing in Gibson's weekly market letter of December 7, 1917.

AVERAGE YEARLY INDEX NUMBERS, 1890-1917.

Year.	Average yearly index number.	Year.	Average yearly index number.	Year.	Average yearly index number.
1890.....	43.4	1900	42.2	1910	59.3
1891.....	50.8	1901	44.5	1911	56.9
1892.....	45.3	1902	53.5	1912	62.6
1893.....	46.0	1903	49.0	1913	58.1
1894.....	43.4	1904	48.3	1914	60.8
1895.....	42.0	1905	47.3	1915	64.0
1896.....	34.0	1906	49.8	1916	59.3
1897.....	34.7	1907	50.9	1917	109.9
1898.....	38.7	1908	54.2	(11 mos.)	
1899.....	41.6	1909	59.2	.....	.....

Monthly averages for the years 1913-1917 are as follows:

MONTHLY AVERAGES, 1913-1917.

Month.	1913	1914	1915	1916	1917
	Average.	Average.	Average.	Average.	Average.
January.....	55.5	58.2	64.7	65.6	87.4
February.....	57.0	58.2	68.0	68.2	90.5
March.....	57.8	57.8	66.7	69.5	96.4
April.....	59.0	57.7	67.8	71.3	109.2
May.....	57.8	57.9	68.3	72.3	118.5
June.....	57.3	59.4	64.3	70.8	114.2
July.....	58.6	58.9	64.4	71.9	116.4
August.....	59.3	64.9	63.1	76.1	117.9
September.....	60.0	68.6	58.5	78.4	119.4
October.....	58.4	62.9	60.0	82.2	120.1
November.....	58.4	63.1	60.6	87.1	119.9
December.....	58.2	62.3	62.1	85.1	.....



## 7.—CANADIAN INDEX NUMBERS OF WHOLESALE PRICES.

"This compilation of wholesale prices for the Dominion of Canada is published yearly by the Department of Labor of Canada at Ottawa. Index numbers for each group of commodities and for its main subdivisions are also published monthly in the Labor Gazette, the official organ of the department of labor.

### HISTORY.

"The first report on wholesale prices made by the Canadian Department of Labor was published in 1910 and covered the years 1890 to 1909, inclusive. The object in undertaking this work was to determine as accurately as possible the nature and extent of the general rise in wholesale prices which had occurred in Canada during recent years. Prior to the beginning of this work the Labor Gazette, the official organ of the department, had for some time published each month certain data regarding prices in connection with its review of industrial and labor conditions. The importance of the subject and the unsatisfactoriness of general statements in a matter of this kind led the department in 1910 to adopt a more comprehensive and systematic method of treating the subject of prices in the monthly summary and also to extend the inquiry into the wholesale prices of a selected list of representative staple commodities back over the preceding 20 years.<sup>1</sup> In subsequent annual and monthly reports the price data have been brought down to the present time.

### SOURCE OF QUOTATIONS.

"It is stated that the practice followed throughout the investigation was 'to collect and collate the best available published information and to submit the result for verification to long-established firms at the wholesale center in question.' The daily press and weekly trade journals of Canada and the printed reports of exchanges, boards of trade, etc., are mentioned as the principal sources of data. When reliable printed matter failed, information was obtained from books of manufacturers and wholesalers.

"A source used for verification purposes in the case of a few important raw materials imported by manufacturers direct from the primary markets of the world, and in which there is no wholesale trade in Canada, was the declared import values, which were divided by total quantities to show the average prices. Toronto and Montreal markets furnish the great mass of the quotations published in the reports.<sup>2</sup>

### BASE PERIOD.

"The base period selected for the computation of index numbers for practically all commodities is the decade 1890-1899. Two reasons are given for this selection: (1) The period was considered as representative of normal conditions as any available, containing a time of falling and a time of rising prices, and (2) direct comparison with the similar study of the United States Department of Labor was considered very desirable, and this was made possible by choosing the same base period.<sup>1</sup> In a few instances, owing to special reasons, a period other than the decade 1890-1899 has been chosen as the base.

<sup>1</sup> Wholesale prices in Canada 1890-1909, p. 2.

<sup>2</sup>Idem, p. 8.



## PRICES: HOW COMPUTED AND SHOWN.

"In the first report the prices quoted are stated to be 'for the most part those prevailing on the opening day of each month, though if, in particular cases, these were found to be abnormal, an average of the week was taken.'<sup>2</sup> In the report for 1912 it is stated that the manner of quoting prices is the same as in the earlier reports except that for certain articles subject to rapid fluctuations (grains, live animals, certain meats, butter, eggs, potatoes, and fresh fruits—40 in all) weekly instead of monthly quotations were obtained.<sup>3</sup> This plan was continued in the preparation of the wholesale-price data for 1913.

"Difficulty was encountered in obtaining quotations of a uniform quality of certain articles, particularly of manufactured articles, through a series of years. It is stated in the reports that wherever such articles are quoted, care has been taken to see that changes in quality are accounted for in the prices given.<sup>4</sup> In a few cases—as, for example, in the case of cotton goods—the prices published are not simple quotations on a single variety, but averages of a large number of varieties.

"In the annual reports the actual prices are published for each commodity by months, or, in some cases, by weeks, and the average of these quotations is given as the price for the year. Index numbers are published in the annual reports for each commodity by years and in the Labor Gazette for each group and subgroup (56 items in all) by months currently. Index numbers do not seem to be published for single commodities by months. Many of the actual prices are stated in the form of a range of price, and apparently the mean is used for computations based on these figures.

"Some commodities whose price is largely governed by seasonal conditions are quoted for only those months of the year when they are in season—as, for example, blue grapes, for which quotations are given only for September and October.

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<sup>1</sup> Wholesale prices in Canada, 1890-1909, p. 440

<sup>2</sup> Idem, p. 439.

<sup>3</sup> Idem, 1912, p. 2

<sup>4</sup> Idem, 1890-1909, p. 439

## CANADA—WHOLESALE PRICES INDEX.

TABLE SHOWING INDEX NUMBERS OF ALL COMMODITIES BY GROUPS, 1890-1916.

[Average Prices 1890-1899=100.]

	1890	1891	1892	1893	1894	1895	1896	1897	1898
1. Grains and fodder.....	116.7	123.9	106.7	99.1	94.3	98.8	85.2	80.6	98.8
2. Animals and meats.....	111.2	104.7	108.5	117.7	98.7	92.2	82.4	90.4	97.9
3. Dairy produce.....	103.0	106.2	105.8	110.4	104.6	94.8	90.1	90.1	92.9
4. Fish.....	103.3	97.3	90.6	99.7	96.4	101.4	102.6	98.6	99.6
5. Other foods.....	120.3	121.3	104.7	102.1	95.0	95.2	87.1	86.0	94.3
6. Textiles.....	111.4	104.2	102.2	101.2	97.3	93.6	96.9	98.0	95.2
7. Hides, leather, boots.....	100.6	102.6	99.8	101.8	89.9	98.6	92.9	100.1	105.0
8. Metals and implements:—									
(a) Metals.....	125.4	114.4	107.6	102.1	91.1	87.0	87.5	85.7	87.6
(b) Implements.....	103.8	103.2	102.9	102.6	102.2	101.0	98.5	93.1	94.3
9. Fuel and lighting.....	107.4	106.7	106.6	102.9	97.5	97.0	98.9	96.4	93.5
10. Buildings materials:—									
(a) Lumber.....	103.5	102.7	104.4	103.7	104.6	102.8	97.1	93.9	90.8
(b) Miscellaneous.....	117.6	110.4	106.8	103.7	98.7	95.2	93.9	87.7	87.4
(c) Paints, oils, glass.....	109.5	103.8	98.2	98.6	95.5	96.1	96.2	95.5	100.0
11. House furnishings.....	100.2	100.5	100.9	101.1	101.3	97.9	97.5	99.8	99.6
12. Drugs and chemicals.....	110.5	110.3	104.4	104.4	103.1	100.3	99.8	96.5	96.8
13. Miscellaneous:—									
(a) Furs, raw.....	86.5	99.7	103.7	123.6	113.5	80.5	80.7	88.0	111.1
(b) Liquors, tobaccos.....	94.9	99.0	99.7	99.4	98.7	99.4	98.0	103.9	103.9
(c) Sundries.....	112.0	106.7	98.9	100.3	93.7	91.3	92.6	91.2	103.3
All.....	110.3	108.5	102.8	102.5	97.2	95.6	92.5	92.2	96.1

	1899	1900	1901	1902	1903	1904	1905	1906	1907
1. Grains and fodder.....	96.7	99.9	107.3	116.1	106.5	115.5	116.4	118.5	140.2
2. Animals and meats.....	95.1	103.4	111.3	122.2	117.9	111.3	120.7	130.1	133.8
3. Dairy produce.....	101.4	109.0	120.5	106.9	108.9	107.2	115.1	120.2	131.5
4. Fish.....	110.0	106.4	113.2	110.2	116.2	119.5	115.7	121.8	129.5
5. Other foods.....	93.6	96.4	98.6	98.4	98.1	101.8	100.7	103.1	112.5
6. Textiles.....	99.8	100.0	103.6	101.0	105.9	110.4	114.6	123.4	126.1
7. Hides, leather, boots.....	109.4	113.8	112.8	118.2	115.7	113.6	119.6	128.1	125.5
8. Metals and implements:—									
(a) Metals.....	111.9	121.2	110.4	102.8	105.5	99.7	108.4	128.6	134.8
(b) Implements.....	98.0	100.1	102.2	104.7	105.7	106.2	106.1	106.0	107.1
9. Fuel and lighting.....	96.9	100.8	98.1	104.9	111.0	103.0	104.1	106.4	108.8

TABLE SHOWING INDEX NUMBERS OF ALL COMMODITIES BY GROUPS, 1890-1916.

[Average Prices 1890-1899 = 100.]

	1889	1900	1901	1902	1903	1904	1905	1906	1907
10. Buildings materials:—									
(a) Lumber.....	95.8	114.0	114.6	122.0	128.8	131.3	134.1	152.7	165.2
(b) Miscellaneous.....	97.2	111.8	106.0	104.6	107.7	107.2	106.8	104.7	108.7
(c) Paints, oils, glass.....	107.6	125.9	121.9	128.1	126.3	122.4	125.3	135.3	141.2
11. House furnishings.....	100.2	110.2	107.9	109.2	109.6	112.7	107.3	113.0	112.7
12. Drugs and chemicals.....	93.3	101.5	99.8	102.2	105.5	109.0	106.4	106.3	108.5
13. Miscellaneous:—									
(a) Furs, raw.....	111.8	147.3	140.9	145.2	168.1	171.3	217.4	229.2	239.4
(b) Liquors, tobaccos.....	102.3	103.3	103.3	103.7	107.0	107.8	108.1	108.1	125.5
(c) Sundries.....	109.5	113.0	110.9	116.8	115.9	119.1	121.1	120.9	123.0
All.....	100.1	108.2	107.0	109.0	110.5	111.4	113.8	120.0	126.2

TABLE SHOWING INDEX NUMBERS OF ALL COMMODITIES BY GROUPS, 1890-1916.

[Average Prices 1890-1899 = 100.]

	1908	1909	1910	1911	1912	1913	1914	1915	1916
1. Grains and fodder.....	148.3	149.9	140.7	148.4	167.3	136.8	156.5	186.9	195.2
2. Animals and meats.....	129.6	148.6	163.6	146.6	160.8	180.8	192.3	187.2	217.7
3. Dairy produce.....	136.3	133.6	135.7	136.2	159.0	154.7	154.4	161.4	183.5
4. Fish.....	120.5	134.0	145.1	143.6	155.7	158.0	156.0	149.7	184.8
5. Other foods.....	110.3	107.6	111.3	118.7	126.0	117.4	118.8	125.5	156.2
6. Textiles.....	111.0	108.3	114.6	119.2	120.7	130.8	133.5	149.2	193.4
7. Hides, leather, boots.....	120.0	135.4	135.4	139.6	152.4	163.9	171.8	180.5	233.4
8. Metals and implements:—									
(a) Metals.....	106.3	101.9	97.6	108.3	117.4	119.1	113.9	152.4	198.9
(b) Implements.....	104.2	102.4	104.5	104.5	104.7	105.6	106.8	112.1	135.2
9. Fuel and lighting.....	102.2	103.8	103.0	100.5	113.3	118.2	110.9	108.8	132.6
10. Buildings materials:—									
(a) Lumber.....	162.6	154.6	158.5	165.4	166.5	181.3	182.1	175.7	182.1
(b) Miscellaneous.....	107.5	105.7	109.2	102.6	105.4	112.7	111.4	115.9	154.9
(c) Paints, oils, glass.....	136.8	135.2	145.5	154.5	148.6	144.8	140.7	157.1	200.5
11. House furnishings.....	112.8	110.4	110.6	110.4	114.5	126.2	129.5	136.5	157.1
12. Drugs and chemicals.....	107.1	103.9	109.5	112.1	115.5	113.3	121.6	181.3	252.2
13. Miscellaneous:—									
(a) Furs, raw.....	231.8	227.2	234.5	252.9	297.3	307.9	205.4	161.9	299.8
(b) Liquors, tobaccos.....	118.0	117.5	132.9	151.2	155.2	134.7	136.9	135.6	142.4
(c) Sundries.....	117.6	121.6	118.0	110.3	104.0	113.1	108.5	116.6	143.0
All.....	120.8	121.2	124.2	127.4	13.	135.5	136.1	148.0	182.0

	1917											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1. Grains and fodder.....	258.7	243.0	254.1	275.9	304.2	290.9	294.1	294.7	280.7	281.0	.....	.....
2. Animals and meats.....	249.2	260.2	269.1	283.0	306.5	280.4	292.6	289.2	293.5	298.4	.....	.....
3. Dairy produce.....	233.3	234.8	224.2	216.0	221.8	205.7	208.6	225.2	229.7	245.2	.....	.....
4. Fish.....	183.8	188.7	195.1	218.0	199.2	198.4	190.4	201.5	214.3	233.0	.....	.....
5. Other foods.....	199.4	212.5	218.4	233.8	253.6	264.6	251.6	217.9	222.4	218.	.....	.....
6. Textiles.....	216.4	223.8	230.7	238.0	242.6	261.1	266.2	274.1	274.8	291.9	.....	.....
7. Hides, leather, boots...	275.9	264.7	254.2	254.2	273.5	275.4	267.6	269.7	268.8	272.6	.....	.....
8. Metals and implements:												
(a) Metals.....	210.9	234.2	241.1	250.0	265.0	274.2	277.8	278.0	<sup>1</sup> 274.0	<sup>1</sup> 261.8	.....	.....
(b) Implements.....	156.5	165.2	165.2	165.2	167.7	192.3	198.7	200.7	199.8	199.8	.....	.....
9. Fuel and lighting.....	159.7	162.5	174.9	171.1	.....	.....	216.1	205.8	213.8	167.0	.....	.....
10. Buildings materials:												
(a) Lumber.....	185.8	189.2	193.5	198.8	204.3	204.4	215.9	221.3	221.3	222.5	.....	.....
(b) Miscellaneous....	179.6	186.0	191.3	146.7	202.5	209.3	214.7	216.1	214.5	212.2	.....	.....
(c) Paints, oils, glass.	213.0	222.8	244.4	252.4	258.4	257.8	256.0	259.6	260.0	259.9	.....	.....
11. House furnishings.....	168.9	168.9	170.2	179.5	190.2	195.7	198.4	198.4	205.6	205.6	.....	.....
12. Drugs and chemicals..	236.7	237.0	246.3	248.7	255.3	254.4	256.6	262.8	268.6	265.7	.....	.....
13. Miscellaneous:												
(a) Furs, raw.....	399.5	403.7	403.7	412.4	396.6	396.6	396.6	388.4	388.4	415.1	.....	.....
(b) Liquors, tobaccos.	167.2	164.8	164.8	167.2	175.5	175.5	175.5	175.5	175.5	165.9	.....	.....
(c) Sundries.....	155.5	155.6	157.2	161.3	183.5	194.2	193.4	196.5	196.5	197.8	.....	.....
All.....	208.1	217.3	220.6	228.7	240.0	242.7	242.6	245.0	243.2	242.6	.....	.....

<sup>1</sup> Calculated.

## 8.—WHOLESALE PRICES IN THE UNITED STATES, SINCE 1914, THE BEGINNING OF THE EUROPEAN WAR.

The Bureau of Labor Statistics shows by its compilation that the wholesale prices of many commodities have more than doubled in the United States since the outbreak of the European war. This is particularly true of grains and metals, immense quantities of which have been sent abroad. As compared with the prices prevailing in July, 1914, the month immediately preceding the opening of hostilities, wheat and flour in the Minneapolis market had increased in June, 1917, more than 200 per cent, corn in Chicago had increased more than 140 per cent, corn meal in New York had increased more than 170 per cent, and good to choice potatoes in Chicago had increased more than 140 per cent. Other articles showing large increases were wool (Ohio, fine fleece, scoured) 134.6 per cent, worsted yarn (2-32s, crossbred stock) 138.5 per cent, bituminous coal (run of mine at Cincinnati) 172.7 per cent, electrolytic copper 142.5 per cent, pig lead 194.9 per cent, pig tin 102.6 per cent, Bessemer pig iron 267.1 per cent, and steel billets 419.7 per cent.

A comparison of wholesale prices of important commodities in representative markets from July, 1914, to June, 1917, is contained in the two tables which follow. The average actual money prices for the specified months are shown in the first table. The relative prices in the second table are based on the actual prices, the prices for July, 1914, being taken as 100.



WHOLESALE PRICES OF IMPORTANT COMMODITIES, JULY, 1914-1916, AND  
JANUARY-JUNE, 1917.  
Actual Prices.

Article.	Unit.	Average monthly price.								
		July.			1917.					
		1914.	1915.	1916.	Jan.	Feb.	Mar.	Apr.	May.	June.
Cattle, good to choice steers. . . . .	100 lbs.	\$9.219	\$9.213	\$9.985	\$10.530	\$11.131	\$11.869	\$12.310	\$12.475	\$12.550
Beef, fresh, native steers. . . . .	Pound	.135	.132	.141	.138	.141	.149	.160	.160	.162
Beef, salt, mess. . . . .	Barrel	17.250	17.500	18.250	23.250	23.250	24.313	26.250	29.600	30.500
Hogs, heavy. . . . .	100 lbs.	8.769	7.281	9.825	10.955	12.575	14.794	15.795	16.088	15.706
Bacon, short clear sides. . . . .	Pound	.141	.111	.157	.165	.175	.196	.218	.242	.242
Pork, salt, mess. . . . .	Barrel	23.625	18.500	27.167	32.250	33.250	35.438	39.000	41.450	41.500
Lard, prime, contract. . . . .	Pound	.102	.081	.131	.161	.172	.200	.213	.225	.212
Wheat, No. 1, Northern. . . . .	Bushel	.897	1.390	1.170	1.917	1.808	1.984	2.381	2.981	2.694
Flour, standard patent. . . . .	Barrel	4.594	7.031	6.100	9.215	9.069	9.631	11.619	14.880	13.894
Corn, No. 2, mixed. . . . .	Bushel	.710	.783	.808	.982	1.016	1.123	1.397	1.625	1.716
Meal, fine, yellow. . . . .	100 lbs.	1.425	1.725	1.900	2.650	2.750	2.750	3.100	3.700	3.900
Potatoes, white. . . . .	Bushel	1.206	.444	.863	1.795	2.469	2.275	2.669	2.705	2.950
Sugar, granulated. . . . .	Pound	.042	.058	.075	.066	.069	.071	.082	.079	.075
Hides, packers'. . . . .	Pound	.194	.258	.270	.335	.318	.305	.305	.315	.330
Cotton, upland, middling. . . . .	Pound	.131	.092	.130	.176	.163	.186	.203	.208	.255
Cotton, yarn, carded, 10-1. . . . .	Pound	.215	.160	.253	.340	.320	.310	.360	.365	.375
Wool, fine fleece, scoured. . . . .	Pound	.575	.652	.761	1.000	1.087	1.130	1.152	1.304	1.348
Worsted yarn, 2-32s. . . . .	Pound	.650	.850	1.100	1.250	1.250	1.270	1.300	1.400	1.550
Coal, bituminous. . . . .	2000 lbs.	2.200	2.200	2.200	4.500	5.000	5.000	5.000	6.000	6.000
Copper, electrolytic. . . . .	Pound	.134	.199	.265	.295	.330	.363	.340	.310	.325
Pig lead. . . . .	Pound	.039	.058	.069	.075	.085	.095	.094	.099	.115
Pig tin. . . . .	Pound	.311	.391	.389	.430	.490	.515	.543	.585	.630
Pig iron, Bessemer. . . . .	2240 lbs.	14.900	14.950	21.950	35.950	35.950	37.700	42.200	45.150	54.700
Steel billets. . . . .	2240 lbs.	19.000	21.380	41.000	63.000	65.000	56.250	73.750	86.000	98.750
Spelter. . . . .	Pound	.051	.220	.113	.098	.099	.109	.108	.095	.096
Petroleum, crude. . . . .	Barrel	1.750	1.350	2.600	2.850	3.050	3.050	3.050	3.100	3.100

WHOLESALE PRICES OF IMPORTANT COMMODITIES, JULY, 1914-1916, AND  
JANUARY-JUNE, 1917.  
Relative Prices.

Article.	Unit.	Relative price.								
		July.			1917.					
		1914.	1915.	1916.	Jan.	Feb.	Mar.	Apr.	May	June.
Cattle, good to choice steers. . . . .	100 lbs.	100	99.9	108.3	114.2	120.7	128.7	133.5	135.3	36.1
Beef, fresh, native steers. . . . .	Pound	100	97.4	104.7	101.9	104.7	110.4	118.5	118.5	19.6
Beef, salt, mess. . . . .	Barrel	100	101.4	105.8	134.8	134.8	140.9	152.2	171.6	76.8
Hogs, heavy. . . . .	100 lbs.	100	83.0	112.0	124.9	143.4	168.7	180.1	183.5	79.1
Bacon, short clear sides. . . . .	Pound	100	78.8	111.3	117.3	124.3	139.3	154.8	171.8	71.8
Pork, salt, mess. . . . .	Barrel	100	78.3	115.0	136.5	140.7	150.0	165.1	175.4	75.7
Lard, prime, contract. . . . .	Pound	100	79.1	128.3	157.1	168.4	195.4	208.3	220.0	7.2
Wheat, No. 1 Northern. . . . .	Bushel	100	155.0	130.5	213.6	201.5	221.2	265.5	332.2	0.2
Flour, standard patent. . . . .	Barrel	100	153.1	132.8	200.6	197.4	209.7	252.9	332.9	2.4
Corn, No. 2, mixed. . . . .	Bushel	100	110.2	113.7	138.2	143.1	158.2	196.7	228.8	41.6
Meal, fine, yellow. . . . .	100 lbs.	100	121.1	133.3	186.0	193.0	193.0	217.5	259.6	73.7
Potatoes, white. . . . .	Bushel	100	36.8	71.5	148.8	204.7	188.6	221.2	224.2	44.5
Sugar, granulated. . . . .	Pound	100	138.6	178.6	157.6	163.3	168.1	194.0	189.0	79.5
Hides, packers'. . . . .	Pound	100	132.9	139.3	172.9	163.8	157.4	157.4	162.5	70.3
Cotton, upland, middling. . . . .	Pound	100	70.1	99.3	134.3	124.2	141.6	154.8	158.1	93.8
Cotton yarns, carded 10-1. . . . .	Pound	100	74.4	117.4	158.1	148.8	144.2	167.4	169.8	74.4
Wool, fine, fleece, scoured. . . . .	Pound	100	113.5	132.4	174.1	189.2	196.8	200.6	227.0	34.6
Worsted yarns, 2-32s. . . . .	Pound	100	130.8	169.2	192.3	192.3	195.4	200.0	215.4	38.5
Coal, bituminous. . . . .	2000 lbs.	100	100.0	100.0	204.5	227.3	227.3	227.3	272.7	72.7
Copper, electrolytic. . . . .	Pound	100	148.4	197.8	220.1	246.3	270.5	253.7	231.3	42.5
Pig lead. . . . .	Pound	100	147.4	175.6	192.3	217.9	243.6	239.7	253.3	94.9
Pig tin. . . . .	100 lbs.	100	125.7	125.0	138.3	157.6	165.6	174.4	188.1	2.6
Pig iron, Bessemer. . . . .	2240 lbs.	100	100.3	147.3	241.3	241.3	253.0	283.2	303.0	67.1
Steel billets. . . . .	2240 lbs.	100	112.5	215.8	331.6	342.1	348.7	388.2	452.6	19.7
Spelter. . . . .	Pound	100	435.6	222.8	193.1	195.6	215.4	212.9	188.1	90.7
Petroleum, crude. . . . .	Barrel	100	77.1	148.6	162.9	174.3	174.3	174.3	177.1	77.1

## CHAPTER III

### BUDGETARY STUDIES.

#### 1.—PROPORTION OF FAMILY EXPENDITURES FOR VARIOUS ITEMS.

(From Conditions of Labor in American Industries—Lauck and Sydenstricker, 1917.)

Several important collections of family budgets of wage-earners have been made in the United States in the last fourteen years. The most important of these have been:

“Chapin—The Standard of Living in New York City (1907); More—Wage-Earners' Budgets (1903-1905); Byington—Homestead: A Mill Town (1907-1908); New York State Conference of Charities and Correctives (published in Chapin, *supt. cit.*, 1907); U. S. Bureau of Labor—Women and Child Wage-Earners, Vol. xix (1909); British Board of Trade—The Cost of Living in American Towns (1909); Eighteenth Annual Report of the Commissioner of Labor on Cost of Living (1901); J. C. Kennedy and others—Wages and Family Budgets in the Chicago Stockyard District (1909-1910); Pittsburgh Associated Charities report (1910).

“From these the conclusion appears warrantable that the family of average size and of earnings within the predominant ranges of income disposes of its income in approximately the following manner of existing prices.

	Per Cent.
Food.....	40 to 50
Rent.....	17 to 20
Clothing.....	12 to 15
Fuel and lighting.....	4 to 8
Sundries.....	10 to 17

“These approximations take into consideration the rise in prices of foods and in rents. They indicate the important fact that something like four-fifths of the family income must be spent for subsistence, clothing and shelter. For all of the other items of expenditure which contribute to the health, comfort and contentment of the family a comparatively small proportion of the family income is available. As an illustration the more detailed data obtained from an intensive study by the U. S. Bureau of Labor of the annual budgets of 2,567 workingmen's families may be presented.”

PER CENT OF EXPENDITURE FOR VARIOUS PURPOSES IN 11,156 NORMAL FAMILIES  
BY CLASSIFIED INCOME

Classified Income.	Rent	Fuel	Light- ing	Food	Cloth- ing	Sun- dries	Total
Under \$200.....	\$16.93	\$ 6.69	\$ 1.27	\$50.85	\$ 8.68	\$15.58	\$100.00
\$200 or under \$300.....	18.02	6.09	1.13	47.33	8.66	18.77	100.00
300 or under 400.....	18.69	5.97	1.14	48.09	10.02	16.09	100.00
400 or under 500.....	18.57	5.54	1.12	46.88	11.39	16.50	100.00
500 or under 600.....	18.43	5.09	1.12	46.16	11.98	17.22	100.00
600 or under 700.....	18.48	4.65	1.12	43.48	12.88	19.39	100.00
700 or under 800.....	18.17	4.14	1.12	41.44	13.50	21.63	100.00
800 or under 900.....	17.07	3.87	1.10	41.37	13.57	23.02	100.00
900 or under 1,000.....	17.58	3.85	1.11	39.90	14.35	23.21	100.00
1,000 or under 1,100.....	17.53	3.77	1.16	38.79	15.06	23.69	100.00
1,100 or under 1,200.....	16.59	3.63	1.08	37.68	14.89	26.13	100.00
1,200 or over.....	17.40	3.85	1.18	36.45	15.72	25.40	100.00
Total.....	\$18.12	\$ 4.57	\$ 1.12	\$43.13	\$12.95	\$20.11	\$100.00

PER CENT OF TOTAL FAMILY INCOME EXPENDED FOR MEAT, ALL FOOD, RENT, AND  
FOR FOOD AND RENT IN 3,215 FAMILIES IN 1909.. (a)

Items of Expenditures	Families Reporting Weekly Incomes of							
	Under \$ 9.73	\$9.73 and under 14.60	\$14.60 and under 19.47	\$19.47 and under 24.33	\$24.33 and under 29.20	\$29.20 and under 34.07	\$34.07 and under 38.93	\$38.93 and over
Meat.....	\$12.95	\$13.49	\$12.22	\$11.36	\$10.50	\$ 9.32	\$10.23	\$ 9.28
All food.....	51.39	47.62	44.15	41.19	37.88	33.53	34.49	28.40
Rent.....	19.53	17.74	16.66	15.34	14.04	12.01	12.04	9.91
Food and rent.....	70.92	65.36	60.81	56.53	51.92	45.54	46.53	38.31

(a) Compiled from digest of British Board of Trade report on the cost of living in American towns, Sen. Doc. 38, 62d Cong., 1st Sess., p. 44. The families included were native white and British-born in cities in northern states.

## 2.—NAVY DEPARTMENT RATION FOR ENLISTED MEN.

The Paymaster General of the Navy, in his Annual Report for the Fiscal Year 1917, made the following comment on the increased cost of the "navy" ration during the past year, (pages 18-19).

"The unusual, if not indeed unprecedented, rise in the cost of nearly all staple articles of food during the year has of course been directly reflected in the cost of the NAVY ration which, for 1917, was \$0.438 as against \$0.37648 for 1916. \* \* \* \* \*

"While, however, the average cost of the ration increased about twenty per cent over the preceding year, statistics compiled by the Department of Labor show that there was an increase of about forty per cent in the wholesale prices of the principal items of food; so that, had the cost of the ration increased proportionately with the rise in the food market, it would have cost approximately a million and a half dollars more to feed the NAVY than it actually did—somewhat over four thousand dollars a day.

"This was accomplished by the rigid enforcement of the regulations prohibiting the purchase of patent and proprietary foods, by closely scrutinizing all reports of the survey of provisions rendered unfit for use to the end that wherever possible all causes for loss would be eliminated by inquiry into every case where ships operating under the same conditions showed a marked difference in the cost of the ration, by the preparation of such items as cakes, pies, ice cream, etc., on board ship rather than the purchase of the higher priced manufactured articles and by the exercise of care in the purchase of provisions generally to the end that all items might be purchased when they are most plentiful and when, therefore, the market is the most advantageous."

## 3.—CANADIAN BUDGET.

The Department of Labor of the Canadian (Dominion) Government prepares and publishes monthly the cost per week of an average family budget of staple foods, fuel and lighting, and rent. The following table as published in the September number of the Canadian Labour Gazette, shows this budget in a comparative form for the period 1910-1917 (through August).



COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS, FUEL AND LIGHTING AND RENT, IN TERMS OF THE AVERAGE RETAIL PRICES IN SIXTY CITIES IN CANADA.

	Quantity	1910	1911	1912	1913	1914			
						Jan.	April	July	Oct.
Beef, sirloin steak.....	2 lbs.	c. 37.6	c. 39.8	c. 41.6	c. 44.4	c. 46.4	c. 49.0	c. 49.4	c. 50.2
Beef, chuck roast.....	2 lbs.	26.0	27.8	28.0	29.6	32.6	33.0	33.6	35.0
Veal, roast.....	1 lb.	12.8	14.0	14.4	15.7	16.6	17.6	17.4	18.1
Mutton, roast.....	1 lb.	16.8	18.0	17.8	19.1	20.9	21.0	20.9	21.4
Pork, roast, fresh.....	1 lb.	18.0	17.8	17.5	19.5	20.6	20.3	20.2	20.4
Pork, salt, mess.....	2 lbs.	34.4	33.0	33.2	35.2	36.2	37.0	37.4	38.0
Bacon, breakfast.....	1 lb.	24.5	23.8	22.5	24.7	24.8	26.1	25.5	26.9
Lard, pure leaf.....	2 lbs.	40.6	36.0	35.6	38.4	37.2	38.2	36.8	37.4
Eggs, fresh.....	1 doz.	33.3	32.6	34.3	35.7	45.5	24.0	26.9	35.3
Eggs, storage.....	1 doz.	28.4	27.9	31.2	28.1	33.4	23.2	24.9	31.5
Milk.....	6 qts.	48.0	49.2	49.8	51.6	55.2	53.4	51.0	54.0
Butter, dairy.....	2 qts.	52.0	53.0	58.4	58.0	61.0	59.0	49.8	59.0
Butter, creamery.....	1 qt.	31.9	31.5	31.7	33.9	35.9	34.7	30.0	34.7
Cheese, old.....	1 qt.	18.5	19.2	20.1	20.5	21.3	21.4	21.1	22.0
Cheese, new.....	1 qt.	17.5	17.8	19.5	19.1	19.6	19.3	19.4	20.3
Bread, plain, white.....	15 qts.	66.0	64.5	60.0	61.5	64.2	64.5	63.0	67.5
Flour, family.....	10 qts.	33.0	32.0	34.0	32.0	32.0	33.0	33.0	38.0
Rolled oats.....	5 qts.	21.0	21.0	22.0	22.0	21.5	22.0	21.5	25.0
Rice, good, medium.....	2 qts.	10.4	10.6	11.6	11.4	12.0	11.6	11.6	13.2
Beans, hand picked.....	2 qts.	10.8	10.4	11.6	12.4	11.8	11.8	11.8	13.6
Apples, evaporated.....	1 qt.	11.5	13.8	13.5	12.0	12.4	13.0	13.1	13.7
Prunes, medium.....	1 qt.	9.9	12.2	12.9	11.9	12.2	12.5	12.4	13.2
Sugar, granulated.....	4 qts.	24.0	24.0	26.0	23.6	22.8	22.4	22.0	31.2
Sugar, yellow.....	2 qts.	10.8	11.0	12.0	11.0	10.2	10.4	10.2	14.0
Tea, black.....	1 qt.	8.7	8.9	8.8	8.9	9.1	8.8	9.1	9.9
Tea, green.....	1 qt.	9.1	9.4	9.5	9.3	9.2	9.7	9.3	9.8
Coffee.....	1 qt.	8.9	9.2	9.3	9.4	9.5	9.5	9.4	9.9
Potatoes.....	2 pks.	30.3	44.6	46.3	36.0	38.0	43.3	50.3	35.3
Vinegar, white wine.....	1/8 pt.	.7	.7	.8	.8	.8	.8	.7	.8
ALL FOODS.....		\$6.954	\$7.138	\$7.399	\$7.337	\$7.729	\$7.505	\$7.417	\$7.993
Starch, laundry.....	1/2 lb.	c. 3.1	c. 3.1	c. 3.2	c. 3.2	c. 3.2	c. 3.2	c. 3.2	c. 3.2
Coal, anthracite.....	1/16 ton	48.1	48.8	51.9	55.0	54.1	52.1	53.2	53.9
Coal, bituminous.....	1/16 ton	35.0	35.0	37.5	38.7	37.1	38.4	38.0	37.8
Wood, hard, best.....	1/16 cord	38.8	41.4	41.3	42.5	42.9	43.8	42.5	42.6
Wood, soft.....	1/16 cord	29.4	30.0	30.0	30.6	32.1	34.2	31.8	31.5
Coal Oil.....	1 gal	24.4	23.1	21.0	23.7	23.9	24.4	23.5	24.1
Fuel and lighting.....		\$1.757	\$1.783	\$1.817	\$1.905	\$1.901	\$1.929	\$1.890	\$1.899
Rent.....		\$4.05	\$4.05	\$4.60	\$4.75	\$4.830	\$4.850	\$4.825	\$4.545
Grand total.....		\$12.792	\$13.002	\$13.788	\$14.024	\$14.493	\$14.136	\$14.164	\$14.469



COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS, FUEL AND LIGHTING AND RENT, IN TERMS OF THE AVERAGE RETAIL PRICES IN SIXTY CITIES IN CANADA.

	Quantity	1915				1916			
		Jan.	April	July	Oct.	Jan.	April	July	Oct.
Beef, sirloin steak.....	2 lbs.	c. 47.2	c. 46.6	c. 49.2	c. 47.6	c. 47.2	c. 48.4	c. 52.6	c. 52.4
Beef, chuck roast.....	2 lbs.	32.8	32.8	33.4	32.8	32.4	32.2	35.2	34.4
Veal, roast.....	1 lb.	17.6	17.1	17.3	17.5	17.1	18.1	19.2	19.7
Mutton, roast.....	1 lb.	20.4	20.8	21.3	20.8	21.1	22.6	23.9	24.2
Pork, roast, fresh.....	1 lb.	19.0	18.4	19.5	19.6	19.9	20.9	22.4	23.5
Pork, salt, mess.....	2 lbs.	35.8	34.8	34.4	35.8	36.0	37.0	38.8	40.2
Bacon, breakfast.....	1 lb.	25.1	24.7	26.6	26.0	26.7	27.6	28.7	30.5
Lard, pure leaf.....	2 lbs.	35.6	35.0	35.8	35.8	36.6	37.8	40.4	42.2
Eggs, fresh.....	1 doz.	45.5	23.4	25.3	36.2	46.4	26.6	31.0	43.6
Eggs, storage.....	1 doz.	34.9	21.8	24.9	31.6	36.1	26.0	28.0	38.3
Milk.....	6 qts.	55.2	54.6	52.2	51.0	52.2	52.8	45.0	54.6
Butter, dairy.....	2 qts.	61.8	66.2	56.2	60.8	66.6	66.6	60.4	74.2
Butter, creamery.....	1 qt.	35.0	37.9	32.6	35.1	38.1	38.3	34.5	42.4
Cheese, old.....	1 qt.	22.5	23.6	24.6	24.0	24.4	24.7	25.6	27.8
Cheese, new.....	1 qt.	20.5	22.0	22.6	21.1	22.4	23.3	23.6	26.1
Bread, plain, white.....	15 qts.	67.5	72.0	79.2	66.0	66.0	69.0	70.5	84.0
Flour, family.....	10 qts.	39.0	43.0	41.0	35.0	37.0	37.0	37.0	48.0
Rolled oats.....	5 qts.	24.5	26.0	26.0	24.0	24.0	24.0	24.0	25.0
Rice, good, medium.....	2 qts.	12.2	11.8	11.8	12.1	12.0	12.8	13.4	13.6
Beans, hand picked.....	2 qts.	13.2	13.8	14.8	14.8	16.9	18.3	19.4	20.8
Apples, evaporated.....	1 qt.	12.1	11.6	11.9	12.1	12.5	13.3	13.4	13.4
Prunes, medium.....	1 qt.	12.9	12.9	13.1	12.9	12.7	13.0	13.1	13.2
Sugar, granulated.....	4 qts.	30.8	32.4	31.9	30.0	31.2	34.4	38.4	36.8
Sugar, yellow.....	2 qts.	14.0	14.6	14.6	13.8	14.4	16.0	17.6	16.8
Tea, black.....	$\frac{1}{4}$ qt.	9.6	9.2	9.5	9.7	9.7	9.8	9.9	9.9
Tca, green.....	$\frac{1}{4}$ qt.	9.6	9.7	9.8	9.9	10.0	10.2	10.3	10.2
Coffee.....	$\frac{1}{4}$ qt.	9.9	9.8	9.8	9.8	9.8	9.9	10.0	9.9
Potatoes.....	2 pks.	31.7	32.0	29.3	35.0	47.0	61.5	58.6	53.0
Vinegar, white wine.....	$\frac{1}{8}$ pt.	.8	.8	.8	.7	.8	.8	.8	.8
ALL FOODS.....		\$7.967	\$7.793	\$7.797	\$7.815	\$8.279	\$8.339	\$8.457	\$9.295
Starch, laundry.....	$\frac{1}{4}$ lb.	c. 3.3	c. 3.2	c. 3.3	c. 3.2	c. 3.2	c. 3.3	c. 3.3	c. 3.5
Coal, anthracite.....	$\frac{1}{16}$ ton	54.1	53.1	52.1	51.2	53.2	53.5	54.7	57.9
Coal, bituminous.....	$\frac{1}{16}$ ton	38.0	37.2	35.8	36.9	36.9	37.7	38.0	39.9
Wood, hard, best.....	$\frac{1}{16}$ cord	42.5	34.1	41.7	41.5	41.6	41.5	41.9	43.9
Wood, soft.....	$\frac{1}{16}$ cord	31.2	31.4	30.6	30.2	30.7	30.2	30.2	31.6
Coal Oil.....	1 gal.	23.7	23.6	23.4	23.0	23.0	23.0	22.8	23.0
Fuel and lighting.....		\$1.895	\$1.794	\$1.836	\$1.828	\$1.854	\$1.859	\$1.876	\$1.963
Rent.....		\$4.370	\$4.170	\$4.099	\$3.98	\$3.975	\$3.977	\$4.040	\$4.083
Grand total.....		\$14.265	\$13.789	\$13.765	\$13.660	\$14.140	\$14.208	\$14.406	\$15.376

COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS, FUEL AND LIGHTING AND RENT, IN TERMS OF THE AVERAGE RETAIL PRICES IN SIXTY CITIES IN CANADA.

	Quantity	1917							
		Jan.	Feb.	Mar.	April	May	June	July	Aug.
		c.	c.	c.	c.	c.	c.	c.	c.
Beef, sirloin steak . . . . .	2 lbs.	52.8	54.0	56.2	58.0	61.2	63.2	63.6	62.6
Beef, chuck roast . . . . .	2 lbs.	34.8	35.8	38.2	39.6	43.0	43.6	43.5	43.0
Veal, roast . . . . .	1 lb.	20.3	20.9	21.6	21.7	22.5	22.6	22.8	23.0
Mutton, roast . . . . .	1 lb.	24.8	25.9	26.5	26.9	28.2	28.5	28.9	28.8
Pork, roast, fresh . . . . .	1 lb.	24.6	26.1	26.8	27.3	29.3	30.1	30.0	30.6
Pork, salt, mess . . . . .	2 lbs.	44.8	45.2	46.8	47.6	55.6	54.0	54.1	55.6
Bacon, breakfast . . . . .	1 lb.	31.2	32.6	33.3	34.5	37.3	39.0	39.8	40.4
Lard, pure leaf . . . . .	2 lbs.	48.6	50.2	52.8	56.4	60.2	62.2	62.3	62.2
Eggs, fresh . . . . .	1 doz.	56.9	54.9	46.9	37.1	40.8	42.5	38.9	45.0
Eggs, storage . . . . .	1 doz.	45.3	44.5	41.8	32.9	34.5	36.6	35.9	41.2
Milk . . . . .	6 qts.	59.4	60.6	60.6	60.6	60.0	58.8	59.3	60.0
Butter, dairy . . . . .	2 qts.	88.4	86.4	85.4	85.2	85.6	83.4	75.5	80.2
Butter, creamery . . . . .	1 qt.	48.9	48.0	48.7	47.9	47.7	46.8	42.5	44.9
Cheese, old . . . . .	1 qt.	30.5	31.2	31.9	33.0	34.1	34.0	33.4	33.5
Cheese, new . . . . .	1 qt.	28.8	29.5	30.1	30.8	31.7	32.0	30.3	30.1
Bread, plain, white . . . . .	15 qts.	91.5	91.5	90.5	93.0	111.0	111.0	110.4	110.0
Flour, family . . . . .	10 qts.	53.0	52.0	53.0	59.0	77.0	73.0	69.9	69.0
Rolled oats . . . . .	5 qts.	27.0	26.5	27.5	28.0	30.5	31.5	31.4	31.5
Rice, good, medium . . . . .	2 qts.	13.6	13.6	13.0	13.8	14.6	16.0	16.8	17.2
Beans, hand picked . . . . .	2 qts.	24.4	25.2	25.6	26.8	29.0	30.4	31.5	32.6
Apples, evaporated . . . . .	1 qt.	14.6	14.0	14.2	14.6	15.3	15.4	15.8	16.0
Prunes, medium . . . . .	1 qt.	13.6	13.8	14.0	14.3	14.8	15.1	15.5	19.1
Sugar, granulated . . . . .	4 qts.	36.8	36.4	36.4	38.4	40.0	40.0	39.5	40.4
Sugar, yellow . . . . .	2 qts.	17.0	17.0	16.8	17.6	18.6	19.0	18.3	18.6
Tea, black . . . . .	$\frac{1}{4}$ qt.	10.1	10.4	10.7	10.9	11.4	11.5	11.6	12.0
Tea, green . . . . .	$\frac{1}{4}$ qt.	10.1	10.5	10.7	10.8	11.1	11.3	11.3	11.6
Coffee . . . . .	$\frac{1}{4}$ qt.	9.9	10.5	10.0	10.0	10.1	10.1	10.1	10.1
Potatoes . . . . .	2 pks.	64.7	78.3	98.7	99.0	126.0	127.0	118.2	97.3
Vinegar, white wine . . . . .	$\frac{1}{8}$ pt.	.8	.8	.8	.8	.8	.8	.8	.8
ALL FOODS . . . . .		\$10.272	\$10.463	\$10.695	\$10.765	\$11.819	\$11.894	\$11.618	\$11.677
		c.	c.	c.	c.	c.	c.	c.	c.
Starch, laundry . . . . .	$\frac{1}{2}$ lb.	3.5	3.5	3.5	3.6	3.8	3.9	4.0	4.1
Coal, anthracite . . . . .	$\frac{1}{16}$ ton	64.0	68.7	66.6	64.7	64.8	67.3	63.2	67.7
Coal, bituminous . . . . .	$\frac{1}{16}$ ton	47.7	50.4	51.1	50.8	50.8	53.9	53.8	54.2
Wood, hard, best . . . . .	$\frac{1}{16}$ cord	45.7	47.9	49.6	50.6	51.7	51.9	52.0	53.2
Wood, soft . . . . .	$\frac{1}{16}$ cord	32.7	33.7	36.1	36.9	37.6	39.4	39.7	39.1
Coal Oil . . . . .	1 gal.	23.2	23.2	23.4	24.5	25.3	25.4	25.6	25.8
Fuel and lighting . . . . .		\$2.134	\$2.239	\$2.268	\$2.276	\$2.302	\$2.379	\$2.343	\$2.40
Rent . . . . .		\$4.050	\$4.040	\$4.160	\$4.265	\$4.340	\$4.360	\$4.37	\$4.36
Grand total . . . . .		\$16.464	\$16.778	\$17.158	\$17.342	\$18.500	\$18.672	\$18.368	\$18.478

#### 4.—COST OF LIVING IN THE DISTRICT OF COLUMBIA.

##### INVESTIGATION BY UNITED STATES BUREAU OF LABOR STATISTICS, 1916.

A recent official budgetary investigation for the District of Columbia made by the United States Bureau of Labor Statistics, shows that the incomes of 2110 families earning less than \$1,800 a year were generally insufficient to meet all family expenditures; and furthermore, that family expenditures were in a very large measure inadequate to maintain normal family life in comfort or even decency. Outlays for food, clothing, care in sickness, amusements and recreation were below the minimum requirements.

The study in question was based upon what was considered by the Bureau to be a sufficiently large number of families to permit of trustworthy deductions. It included data for 2110 families, 1481 of which were white and 629 colored. Only those families were included whose principal wage-earner had an income of \$1,800 or less per year, and who had resided in the District of Columbia all of the year 1916.

The average size of the family households were 4.9 person, i. e., including boarders or lodgers; the net family, i. e., excluding the latter, was 3.7 members.

##### INCOMES

Certain studies as to the minimum required to maintain a normal family "upon a level of common decency" indicate a necessary income of \$800 to \$1,000; sums which are assumed to meet only the "creature necessities," yet 38 per cent of the families studied had yearly incomes of less than \$900, and that in a year of unprecedented high prices; and 61 per cent had incomes of less than \$1,200 a year. Of 629 negro families, 29 per cent had to live on less than \$600 a year; and no less than three-fourths lived on less than \$900. Of the white families almost one-fourth (23 per cent) existed on less than \$900 a year. These conditions are characterized by the Federal Commissioner of Labor Statistics as "a shocking state of economic indecency" and as revealing the acute pinch of economic distress among a large proportion of the families.

These statements are furthermore supported by the fact that one-third of the families, both white and colored, closed the year with deficits; and only about a fourth of them were able to show a surplus. "Most of the families lived literally from hand to mouth," as can be readily seen from the following table:

## WHITE AND COLORED FAMILIES REPORTING A SURPLUS, A DEFICIT, OR NEITHER A SURPLUS NOR A DEFICIT, BY INCOME GROUPS.

Income group.	Number of families.	Average size of family (household.)	Average size of net family.	Surplus.		Deficit.		Neither surplus nor deficit.	
				Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$600:									
White.....	65	3.6	2.8	8	12.3	20	30.8	37	56.9
Colored.....	180	4.0	2.9	10	5.6	65	36.1	105	58.3
Total.....	245	3.9	2.9	18	7.3	85	34.7	142	58.0
\$600 and under \$900:									
White.....	270	4.4	3.6	41	15.2	96	35.6	133	49.3
Colored.....	292	4.8	3.6	22	7.5	88	30.1	182	62.3
Total.....	562	4.6	3.6	63	11.2	184	32.7	315	56.0
\$900 and under \$1,200:									
White.....	375	4.8	3.7	83	22.1	126	33.6	166	44.3
Colored.....	113	5.5	3.8	23	20.4	35	31.0	55	48.7
Total.....	488	4.9	3.7	106	21.7	161	33.0	221	45.3
\$1,200 and under \$1,500:									
White.....	400	5.1	4.0	129	32.3	119	29.8	152	38.0
Colored.....	26	6.2	4.2	9	34.6	6	23.1	11	42.3
Total.....	426	5.1	4.0	138	32.4	125	29.3	163	38.3
\$1,500 and over:									
White.....	371	5.5	4.0	186	50.1	68	18.3	117	31.5
Colored.....	18	5.6	4.1	9	50.0	3	16.7	6	33.3
Total.....	389	5.5	4.0	195	50.1	71	18.3	123	31.6
Total:									
White.....	1,481	4.9	3.8	447	30.2	429	29.0	605	40.9
Colored.....	629	4.8	3.5	73	11.6	197	31.3	359	57.1
Total.....	2,110	4.9	3.7	520	24.6	626	29.7	964	45.7

## EXPENDITURES.

It is estimated by the Bureau on the basis of standards carefully worked out in 1907 in the Sheffield Laboratory of Physiological Chemistry (Yale University), that in 1916 the minimum daily expenditure for food for an adult male should be 31 cents. Nevertheless, even when such low standards are taken, and no allowance is made for waste and lack of knowledge of food values, a very large number of the families covered by this investigation fell below the "minimum of subsistence" line and many fell far below. Of 245 families with incomes of less than \$600 per year, almost three-fourths (72%) did not spend \$112.50 a year—or 31 cents a day—for food per equivalent adult male. More than one-half (51%) of the families with incomes ranging between \$600 and \$900 per year spent less than the minimum standard of \$112.50 a year per equivalent adult male; and more than one-third (34%), even in income group \$900 to \$1,200, fell below the standard. The colored families fared worse, but not very materially so. It is quite evident, the report states, that a considerable proportion of the low-income families of Washington do not buy enough food "to maintain the family members in health and strength."

According to the amounts spent in food in 1916, the families scheduled were as follows:



## EXPENDITURES FOR FOOD PER EQUIVALENT ADULT MALE, PER FULL YEAR, 1916

Income group.	Number of families.	Per cent of families spending, per equivalent adult male per year—									
		Under \$75	Under \$87.50	Under \$100	Under \$112.50	Under \$125	Under \$137.50	Under \$150	Under \$162.50	Under \$175	\$175 and over.
Under \$600:											
White.....	65	29.2	38.5	49.2	60.0	73.8	80.0	87.7	92.3	95.4	4.6
Colored.....	180	40.6	52.8	66.1	76.7	88.3	91.7	93.9	96.7	98.3	1.7
Total.....	245	37.6	49.0	61.6	72.2	84.5	88.6	92.2	95.5	97.6	2.4
\$600 and under \$900:											
White.....	270	8.5	18.1	28.1	41.9	53.0	65.9	77.0	84.1	90.4	9.6
Colored.....	292	16.8	34.9	49.0	60.3	67.8	74.3	81.8	88.4	92.8	7.2
Total.....	562	12.8	26.9	39.0	51.4	60.7	70.3	79.5	86.3	91.6	8.4
\$900 and under \$1,200:											
White.....	375	2.1	5.9	17.3	29.6	40.8	52.5	63.2	73.1	81.3	18.7
Colored.....	113	12.4	23.9	36.3	49.6	63.7	71.7	77.0	81.4	88.5	11.5
Total.....	488	4.5	10.0	21.7	34.2	46.1	57.0	66.4	75.0	83.0	17.0
\$1,200 and under \$1,500:											
White.....	400	1.3	5.0	11.3	21.0	30.8	45.5	55.3	64.5	73.3	26.7
Colored.....	26	15.4	23.1	30.8	50.0	53.8	61.5	73.1	76.9	76.9	23.1
Total.....	426	2.1	6.1	12.4	22.8	32.2	46.5	56.3	65.3	73.5	26.5
\$1,500 and over:											
White.....	371	.3	1.6	4.9	11.1	21.8	34.8	48.2	60.9	69.8	30.2
Colored.....	18	5.6	11.1	16.7	33.3	44.4	50.0	66.7	77.8	77.8	22.2
Total.....	389	.5	2.1	5.4	12.1	22.9	35.5	49.1	61.7	70.2	29.8
Total, all groups:											
White.....	1,481	3.8	8.2	15.9	26.2	37.0	49.8	60.9	70.6	78.5	21.5
Colored.....	629	22.4	36.9	49.9	61.8	71.7	77.6	83.6	88.7	92.5	7.5
Total.....	2,110	9.3	16.8	26.1	36.8	47.3	58.1	67.6	76.0	82.7	17.3

Clothing standards are difficult of determination, and all past studies have tended to place requirements too low. The Factory Investigating Committee of New York allowed \$50 per year for a man at work; \$38.50 for a woman in the home and correspondingly lower costs for children. Accepting these standards, however, "it may be said without hesitation, that a large proportion of the families included in this investigation were not supplied with necessary and respectable clothing and were financially unable to keep themselves so clothed." Only among families receiving incomes of \$1,500 and over a year were the minimum requirements secured.

It appears that the average expenditures for clothing in 1916, by the white families with incomes of less than \$900 a year were, for husbands, only \$26.01 and for wives, only \$17.60. For colored families the expenditures were slightly less—for husbands, \$20.72, and for wives, \$16.29. Even for the families with incomes between \$900 and \$1,200, the average clothing expenditures were only \$34.36 for the husbands and \$26.94 for the wives in white families, and \$28.92 for husbands and \$25.23 for wives in colored families. These averages are far below the cost standards described above as absolutely necessary minimum expenditures for healthy and decent clothing. For the sake of brevity this analysis has



been limited to husbands and wives. The expenditures for children were correspondingly low.

As incomes increased, expenditures for care in sickness increased, which suggests that among poorer families such expenditures as are made are inadequate and the results "detrimental to the health of the individual sufferers, and the welfare of the community."

Practically only free amusements are indulged in by families of the low-income groups. Of 83 families receiving incomes of less than \$600 a year, only 35 incurred any direct expenditures for amusements. Amusement, however, is a necessity in normal life, and the New York Factory Investigating Committee allowed \$50 a year as a normal expenditure for recreation and amusement. The average expenditure for amusements per family was \$12.70 and for vacations \$32.39, or \$45.09 for both items.

## 5.—BUDGET PROPOSED BY SEATTLE AND TACOMA, WASHINGTON, STREET RAILWAY EMPLOYES.

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### BRIEF ON BEHALF OF EMPLOYES.

IN RE ARBITRATION OF THE MATTERS NOW IN CONTROVERSY BETWEEN THE PUGET SOUND TRACTION, LIGHT & POWER COMPANY, THE TACOMA RAILWAY & POWER COMPANY AND THEIR EMPLOYEES,  
BEFORE

DR. HENRY SUZZALLO  
JAMES A. DUNCAN  
and  
C. J. FRANKLIN.

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In the course of the arbitration proceedings between the Seattle and Tacoma street railway companies and their employes, the attorneys for the employes, Reynolds and Harrow, submitted in their brief a minimum budget for the street railway workers, based on evidence which had been placed before the Board of Arbitration. After compiling retail prices, they weighted the prices of food and fuel according to the Washington State Bureau of Labor budget (<sup>1</sup>).

Applying the average prices obtained from the foregoing table to the quantities for a family of five, taken from the Government Bulletin, and as followed by the State Labor Commissioner, we have the following:

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<sup>1</sup> See pages 99-101.

## GROCERIES AND MILK.

200 lbs. sugar, granulated cane, @ 9.3c per lb.	\$ 18.60
14 sacks of flour, fancy patent, 49 lb. @ \$3.14.	43.96
2 sacks of corn meal 10 lbs. @ 7.65c.	.77
75 lbs. rolled oats, bulk @ 6½c.	4.88
8 cwt. potatoes, white, @ \$2.25 per cwt.	18.00
25 lbs. beans, navy, @ 19c.	4.75
26 lbs. onions @ 6.5c.	1.77
12 lbs. barley, pearl, @ 12½c.	1.52
10 lbs. split peas @ 12 2-3c.	1.27
22 lbs. rice, Japan, @ 8.95c.	1.97
80 lbs. butter, creamery, @ 50.1c.	40.08
25 lbs. butter, ranch, @ 44.17c.	11.04
30 lbs. soda crackers @ 16.4c.	4.92
80 doz. eggs, fresh, @ 51.71c.	41.37
4 lbs. macaroni @ 9.58c.	.38
20 lbs. cheese, American, @ 30.4c.	6.08
6 lbs. cheese, Swiss (imp.) @ 38¾c.	2.30
12 lbs. raisins, seedless, @ 15c.	1.80
20 lbs. dried prunes @ 15¼c.	3.10
8 doz. lemons @ 35c.	2.80
3 gals. syrup, corn, @ 84c.	2.52
10 lbs. comb honey @ 20.8c.	2.08
3 gals. pickles, sour, @ 55c.	1.65
3 gals. vinegar, cider, @ 45c.	1.35
18 cans canned tomatoes, No. 2, @ 19.8c.	3.56
22 cans canned corn, No. 2, @ 18¾c.	4.13
20 cans canned peas @ 17½c.	3.50
9 cans canned beans, No. 2, @ 14.9c.	1.34
3 lbs. baking soda @ 8 1-9c.	.24
9 lbs. baking powder, cream tartar, @ 38 1-3c.	3.45
12 lbs. corn starch @ 11.6c.	1.39
50 lbs. carrots @ 2 2-3c.	1.34
35 lbs. cabbage @ 2¾c.	.96
40 lbs. coffee @ 32½c.	13.00
10 lbs. tea, medium grade @ 53 1-3c.	5.33
12 pints tomato catsup @ 23 1-3c.	2.50
20 lbs. salt @ 2.28c.	.46
85 bars soap @ 6.3c.	5.42
Vegetables.	20.00
Fruit.	15.00
Milk.	46.65
Total.	\$347.53

## MEAT AND FISH.

75 lbs. lard @ 27.92c.	\$ 20.94
5 cans canned oysters, No. 2, @ 23.34c.	1.17
5 cans canned clams, No. 1, @ 20.26c.	1.01
24 lbs. canned salmon, No. 1, @ 24¾c.	6.18
40 lbs. smoked bacon @ 44.14c.	17.66
20 lbs. smoked ham @ 36.62c.	7.32
10 lbs. smoked shoulder @ 27.4c.	2.74
150 lbs. roast beef @ 20.2c.	30.30
100 lbs. boiling meat @ 15.1c.	15.10
120 lbs. steak @ 23¾c.	28.50
40 lbs. veal @ 23.6c.	9.44
50 lbs. mutton @ 28¾c.	14.38
60 lbs. pork @ 32.1c.	19.26
25 lbs. poultry @ 28.3c.	7.03
68 lbs. fresh fish @ 18.15c.	12.34
	\$193.42
Total groceries.	\$347.53
Total meat and fish.	193.42
Total groceries, meat and fish.	\$540.95
Fuel.	59.70
Total food and fuel.	\$600.65

## CLOTHING FOR FAMILY.

Mr. R. G. Sharp, an attorney in the employ of the defendant companies, allowed \$200 as a sum sufficient to provide clothing for an entire family and divided it among four people—husband, wife and two children.

To take an arbitrary sum as the cost of clothing, and then divide the items which are properly considered as a part of family clothing, so as to come within that sum, is wholly unfair. It is deciding in advance of obtaining the facts; it is drawing the conclusion before ascertaining the premise. We claim that the only fair method of determining the cost of family apparel is to consider item by item the things necessary, and after the items have been agreed upon, and the fair prices ascertained, then total the cost of the items. The result will be the fair sum to be allowed. Any other procedure may result in injustice. If the sum chosen in the first instance is in excess of the proper amount, then items will be added in order to make up the amount. If, on the other hand, the sum is less than the fair amount necessary, items will be removed in order to bring the total cost within the amount allowed. As an illustration, the allowance of \$2 for one underskirt, as the proper number of underskirts, and the correct amount to be allowed for a woman for the period of one year, is entirely insufficient. Common decency and cleanliness will demand more than one underskirt for a woman for the period of one year, and yet Mr. Sharp has allowed only one underskirt and fixed the price thereof at the sum of \$2. Other illustrations could be made from Mr. Sharp's budget. We feel that Mr. Sharp's whole testimony is unreliable. In the first place, he showed himself entirely ignorant of the subject, his whole testimony being based upon the veriest hearsay. The employes, however, presented witnesses who testified from their actual experience. Of course, this Board of Arbitration will follow testimony drawn from actual experience in preference to mere hearsay. We, therefore, claim that the testimony of wives of motormen and conductors was by far the best evidence produced on the subject of women's apparel, and of apparel for children. It is even less than what should be allowed. It does not provide for an Easter bonnet, an Easter dress, or for any of the items dear to a woman's heart. We, therefore, discard Mr. Sharp's whole testimony on this subject as unreliable and unfair, and far below the amount common decency and humanity require. The sums allowed for women's apparel are as follows:

Mrs. Charles J. Hopwood, Tacoma .....	\$162.50
Mrs. C. A. Sturmer, Tacoma .....	155.55
Mrs. J. C. Bumgarner, Seattle .....	192.40
Mrs. Peterson, Seattle .....	196.40
Mrs. J. C. Nelson, Seattle .....	174.95
	<hr/>
	\$882.35

This amount of \$882.35, divided by five, gives an average of \$174.47 as the amount for a woman's clothing for a year.

The sums allowed for a girl of twelve years for a year are as follows:

Mrs. Charles J. Hopwood, Tacoma .....	\$ 91.85
Mrs. C. A. Sturmer, Tacoma .....	91.60
Mrs. Peterson, Seattle .....	79.15
Mrs. J. C. Bumgarner, Seattle .....	99.65
	<hr/>
	\$362.25

making an average of \$90.56 for a girl's clothing.

The sums allowed for a boy of fourteen years for a year are as follows:

Mrs. Charles J. Hopwood, Tacoma.....	\$ 63.05
Mrs. C. A. Sturmer, Tacoma.....	61.10
Mrs. Bumgarner, Seattle.....	74.70
Mrs. Peterson, Seattle.....	87.65
Mrs. J. C. Nelson, Seattle.....	93.70
	<hr/>
	\$380.20

making an average of \$76.04 for a boy's clothing for a year.

The witnesses who testified with reference to the men's clothing were Mr. Wallace and Mr. Morgan. Prices were obtained from McCormack Bros. and Dixon Bros., clothing concerns in Tacoma, and Mr. Wallace also obtained figures from Seattle. Mr. Morgan testified that \$247.95 was the price of items obtained from McCormack Bros., and \$167.85 from Dixon Bros., and Mr. Wallace testified to \$129.20 as obtained in the city of Seattle, but neglected to include a sweater, a mackinaw and an umbrella. We will include these items:

A sweater.....	\$ 7.00
Mackinaw.....	8.00
Umbrella.....	2.50
	<hr/>
Total.....	\$17.50

making a total for Mr. Wallace of \$146.70.

The average expenditure is the sum of \$187.50 a year for a man's clothing.

#### FAMILY UNIT.

The clothing for two children, instead of three, has been taken. The universal family unit, however, throughout the United States, is five. The gradual decrease in the size of the family, we contend, is the result of the increased struggle required by parents to feed, clothe and educate their children. On the present wage and present prices a man hesitates to marry, and married people to rear children. For a street car employe to bring children into the world to suffer the privations required by the present wage and cost of living is sufficient to give pause to any human being. If industrial conditions are to mean an unending struggle for sheer existence, culminating in positive poverty for old age, we must at least sympathize with the point of view of the employe who refuses to marry, or of the married employe who refuses to bring children into the world to add to his present privations. As we have pointed out in our opening statement, the law of the State encourages the rearing of children. We submit this matter to the good judgment and common sense of the Board of Arbitration. We contend that a family of five is the proper unit, and that to limit the family budget to a family of four, or a family of three, is establishing a principle that is not for the best interest of our State and country.



### PROPER AND NECESSARY EQUIPMENT AND MAINTENANCE OF A HOME ACCORDING TO A REASONABLE STANDARD OF LIVING.

Mr. Gottstein, of the Gottstein Furniture Company, testified that \$5 a month, or \$60 a year, was the minimum that could be allowed to maintain the furniture in the home. Mr. Sharp has allowed \$30 a year to cover this item. Mr. Gottstein testified that he has had actual experience in selling home equipment to street car people, and that from his experience he gave his testimony. Mr. Sharp has had no actual experience. It would seem that if this is to be determined from the testimony the sum of \$60 at least should be allowed for the proper maintenance of the household equipment.

### EDUCATION OF CHILDREN.

The education of children is compulsory in this State. School books are free, but school books do not cover the entire cost of education of children. Personal experience proves to the contrary. Whether the child is attending kindergarten, grammar school, high school, or the university, entertainments and social obligations that the child must meet require the expenditure of a small sum each month. One dollar per month will not cover fully this item. We will, however, allow the sum of one dollar per month, or \$12 per year to cover cost incident to the education of children. Schools create a taste for reading, which results in the requirement of books outside of the books furnished in the school. While we suggest the foregoing allowance for education of children, we do so with knowledge that the actual expenditure will exceed that amount.

### DENTISTRY, MEDICINE, GLASSES AND SICKNESS.

Witnesses testified as to the amount required to be expended for these items. No two families will expend the same amount. Mrs. Hannan testified that it cost her family approximately \$10 a month. Mr. Sharp has allowed the sum of \$25 a year, or \$2.08 a month. This sum is, on its face, far too small to cover the average cost of dentistry and sickness. Ten dollars per month in some families would be more than is necessary. If one child is born into the family, the expenditure for the year would exceed this amount in view of other probable costs for sickness during the same year. We will allow for these requirements the sum of \$60 a year, or \$5 per month. This sum clearly is very moderate for that purpose. Many families will far exceed it, and very few will fail to exhaust it.



## DUES TO CHURCHES OR FRATERNAL SOCIETIES.

The testimony has shown that approximately 33% of the employes in the city of Seattle belong to some church, and a larger percentage belong to fraternal societies. The minimum dues for membership in a fraternal society, which is not optional, exceed the sum of \$1 per month. Some fraternal societies having the insurance feature charge considerably more than \$1, some less than \$1. One dollar per month certainly is a very moderate sum to allow for this item. We will, however, adopt it and allow \$12 per year for church and fraternal societies.

## ADEQUATE INSURANCE.

Three witnesses have testified on this subject, two for the employes and one for the companies. Happily these three agreed upon the amount that should be taken out of the wage each month for insurance. Mr. Dwight Mead, witness for the companies, testified that 10% should be allowed. Mr. Hughes and Mr. Silliman testified to the same effect. This amount we think is fair and reasonable for insurance. We are willing to accept less, on the basis of a flat allowance of \$10 per month for insurance. The allowance will purchase insurance in the amounts set forth in the following table, beginning with the age of twenty-one years:

21 years @ \$19.60 per thousand	\$6,125
22 years @ 20.05 per thousand	5,975
23 years @ 20.50 per thousand	5,850
24 years @ 20.95 per thousand	5,725
25 years @ 21.45 per thousand	5,580
26 years @ 22.00 per thousand	5,450
27 years @ 25.55 per thousand	5,340
28 years @ 23.15 per thousand	5,190
29 years @ 23.75 per thousand	5,060
30 years @ 24.35 per thousand	4,940
31 years @ 25.00 per thousand	4,800
32 years @ 25.70 per thousand	4,675
33 years @ 26.45 per thousand	4,530
34 years @ 27.35 per thousand	4,400
35 years @ 28.10 per thousand	4,275
36 years @ 28.95 per thousand	4,160
37 years @ 29.85 per thousand	4,025
38 years @ 30.80 per thousand	3,910
39 years @ 31.80 per thousand	3,775
40 years @ 32.90 per thousand	3,650
41 years @ 34.10 per thousand	3,530
42 years @ 35.35 per thousand	3,400
43 years @ 36.65 per thousand	3,278
44 years @ 38.05 per thousand	3,150
45 years @ 39.55 per thousand	3,040
46 years @ 41.14 per thousand	2,920
47 years @ 42.80 per thousand	2,805
48 years @ 44.55 per thousand	2,690
49 years @ 46.35 per thousand	2,595
50 years @ 48.30 per thousand	2,485
51 years @ 50.35 per thousand	2,390
52 years @ 52.55 per thousand	2,280
53 years @ 54.90 per thousand	2,190
54 years @ 57.40 per thousand	2,090
55 years @ 60.06 per thousand	2,000
56 years @ 62.85 per thousand	1,920
57 years @ 65.85 per thousand	1,850
58 years @ 69.05 per thousand	1,740
59 years @ 72.45 per thousand	1,660
60 years @ 76.05 per thousand	1,575

We, therefore, allow for the item of insurance the sum of \$120 per annum as a very modest sum for that purpose.

# READING MATTER AND MUSIC FOR THE HOME AND SOME AMUSEMENTS FOR PARENTS AND CHILDREN.

Under this heading we will include toys for the children, and music and reading matter for the home. The local dailies delivered to the home on the basis of annual subscription will cost as follows:

1. Post-Intelligencer, \$9.00 per year.
2. Seattle Daily Times, 9.00 per year.
3. Seattle Star, 3.50 per year.

Any good magazine will cost \$1.20 per year. A musical instrument, together with music, in the home will cost \$12 per year approximately. Toys for the children will cost not less than \$6 per year. The total expenditure for these items, without extravagance, is as follows:

Newspapers (allowed by Mr. Sharp, including magazine) . . . . .	\$12.00
Musical Instruments (including music) . . . . .	12.00
Toys, etc., for children . . . . .	6.00
Total . . . . .	<u>\$30.00</u>

## GAS.

Mr. Sharp allows \$10 per year for gas. From experience we know that this sum falls far short of the necessary yearly expenditure for gas in a home under present prices. Mr. Sharp probably does not know that the price of gas has been increased. From figures we have been able to obtain, we feel that the sum of \$22.16 should be allowed for this item.

## PROFIT TO PROVIDE FOR INCAPACITY OF OLD AGE.

How rarely do we ever associate the employe with profits over the necessities of life! How rarely do we ever contemplate the business man apart from his profits! "How is business?" is the usual salutation. Around the word "profits" are centered the very lives of thousands of Americans. Profit is the amount left in the hands of the business man after all the costs of doing business have been paid. Profit to the employe is the amount of his wages left in his hands after paying all the costs of living. If the employe is not to be a charge upon the State when he reaches the point of incapacity as the result of age, he must have profits. Some countries recognize this truism and old age pensions are provided. Our Government has not recognized it, and as a result the broken-down employe is left in old age at the mercy of charity.

If a man out of his wages can save \$10 per month, at the end of the first year he will have accumulated \$120, and if thereafter every year he is permitted to save \$120 and his savings are placed at 4% interest, compounded semi-annually, at the expiration of ten years he will have the sum of \$1,442.30; at the expiration of twenty years, \$3,592.81; at the expiration of thirty years, \$6,779.67; at the expiration of forty years, \$11,538.46. In the interim of accumulation he will be protected by insurance. The sum of \$120 per year for profit is certainly not

exorbitant. If you ask the average working man what he is making, he says, "Oh, I am making a living." What did the slave make?—a living. It is our contention that the employe is entitled to something more than a living. For this item we ask that he be allowed to make as a profit the sum of \$120 per year. If this allowance is made it will give the very saving and the very ambitious a chance in the world. He can deny himself even the necessities of life to get to a position of safety. It will make the job held by the employe worth something. We will therefore allow this item which Mr. Sharp has omitted.

#### HOUSE RENT, CAR FARE AND TOBACCO.

We will agree with Mr. Sharp in his allowance of \$15 per month, including water, as the amount to be allowed for rent, and fix the sum of \$180 per year to cover that item. We also accept his allowance of \$65 for street car fare. Mr. Sharp has allowed the sum of \$6.20 per year for tobacco. To this we add the same amount for the wife for ice cream, candy, etc., making a total of \$12.40.

#### COST OF LIVING FOR FAMILY OF FIVE PERSONS.

Groceries, meats and fish.....	\$ 540.95
Fuel.....	59.70
Clothing for wife.....	174.47
Clothing for girl of 12 years.....	90.56
Clothing for boy of 14 years.....	76.04
Clothing for extra child.....	83.30
Clothing for man.....	187.50
Maintenance household equipment.....	60.00
Education of children.....	12.00
Dues to church or fraternal society.....	12.00
Dentistry, medicine, etc.....	60.00
Insurance.....	120.00
Reading matter, music, etc.....	30.00
Savings for old age.....	120.00
Gas for household use.....	22.16
Electric light.....	12.00
Rent and water.....	180.00
Street car fare.....	65.00
Tobacco, ice cream, etc.....	12.20
Total.....	\$1,917.88

## 6.—BUDGET AWARDED TO SEATTLE AND TACOMA, WASHINGTON, STREET RAILWAY EMPLOYEES.

The Board of Arbitration referred to in the previous section awarded the following minimum budget as the basis of its wage award:

### FINDINGS OF THE BOARD OF ARBITRATION APPOINTED TO DETERMINE MATTERS IN CONTROVERSY BETWEEN THE PUGET SOUND TRACTION, LIGHT & POWER CO., THE TACOMA RAILWAY & POWER COMPANY AND THEIR EMPLOYEES.

Groceries—Meat—Fish.....	\$533.40
Fuel.....	60.00
Clothing—man.....	90.50
Clothing—woman.....	87.00
Clothing—girl of 8 or 9.....	32.50
Clothing—boy of 14.....	48.50
Clothing—boy of 5 or 6.....	33.00
Maintenance of household equipment.....	40.00
Education.....	11.00
Church—Fraternal dues.....	20.00
Medicine—doctor, dentist.....	60.00
Insurance.....	30.00
Reading matter, music.....	*
Savings.....	100.00
Gas.....	20.00
Electric light.....	15.00
Rent and water.....	184.00
Street car fare.....	35.70
Tobacco, ice cream.....	30.00
Recreation—movies, etc.....	30.00
Incidentals—stamps, barber, etc.....	25.00
Miscellaneous.....	20.00
<b>Total.....</b>	<b>\$1,505.60</b>

\*See Education.

Minimum Comfort Budget  
for one year for a  
family of five.

### TOTAL BUDGET

Clothing.....	\$ 291.50
Food.....	533.40
Sundries.....	366.00
Rent, etc.....	314.70
<b>Total.....</b>	<b>\$1,505.60</b>

### REMARKS ON TOTAL BUDGET.

This budget may be called a minimum comfort budget and is slightly higher than a minimum health budget. Various minimum health budgets have been constructed and vary slightly from city to city and significantly from year to year as the cost of living rises. The minimum comfort budget has been rarely set by experts. Theoretically such a standard would vary according to the definition of comfort of the particular investigator. Practically such varying levels are not as great as would seem theoretically because minimum comfort budgets, actually existing, group around a definite level.



The accompanying budget is not one for an **ideal** family. The ideal wife is one who wastes no calories in food preparation and one having the expert knowledge of sewing of a graduate in domestic economy; but few actual wives have had the benefit of such education.

The budget is, however, a **generalized** budget. Thus some men smoke and some do not. The item for smoking should be generalized very much as the statistical term, the arithmetic mean, is a generalized term.

Actual budgets **vary** around a particular definite level, just as men vary in stature and weight. Particular extremes are therefore not cited; but the items have been set near an approximate arithmetic mean of budgets, many of which have been collected from existing families; although there is some argument for setting items nearer the upper variations than near the mean.

The budget is for a family of five. Three children are chosen for various reasons. (a) Three children at least are necessary for the race to perpetuate itself. (b) Federal and state experts do not make out budgets for less than families of five; thus, neither public nor expert opinion sanctions a smaller standard. (c) Standards of a warring and industrially competing nation would seem to demand three children as a minimum. (d) Unmarried men are less desirable than married men, individually and socially, physically and morally; and the economic barrier to marriage is recognized as an important one. (e) The family of five, while larger than the average in the company's employ, may nevertheless be taken as the standard family of workmen receiving the maximum hourly rate, and the lower differentials worked out from this rate.

### REMARKS ON CLOTHING BUDGET.

The clothing estimates are made on the assumption that the wife does some sewing and remaking of some garments for the children. The figures are based on estimates of the life of garments to fractions of years. The clothing is also for a generalized family.

### CLOTHING.

Man—	
Top coats (mackinaw-overcoat, sweater) .....	\$ 12.50
Suits (uniform, suit, extra trousers) .....	34.00
Shoes (and repairs) .....	14.00
Overshoes .....	1.50
Underwear (woolen and cotton) .....	6.00
Night garments .....	1.50
Hats (uniform cap and hat) .....	3.00
Shirts (flannel and cotton) .....	6.50
Sox .....	3.00
Gloves (average conductor and motorman) .....	5.00
Ties, collars and handkerchiefs .....	2.00
Suspenders and garters .....	1.00
Incidentals (cuff buttons, brush, etc.) .....	.50
Total .....	\$90.50



## CLOTHING—Continued.

Woman—	
Top coat.....	\$ 8.00
Suits.....	12.50
Shoes (and repairs).....	14.00
Rubbers.....	.50
Underwear.....	5.00
Nightgowns.....	3.00
Underskirt.....	2.00
Corset.....	3.00
Kimono.....	.50
Waists.....	4.50
House dresses.....	5.00
Street dress.....	7.50
Hats.....	9.00
Gloves.....	2.50
Incidentals (veils, pins, purse, brush, slippers, hndkfs., etc.)..	4.50
Stockings.....	2.50
Aprons.....	2.00
Umbrella.....	1.00
Total.....	<u>\$87.00</u>

Boy of 13 or 14 years—	
Top coat (mackinaw and sweater).....	\$ 4.50
Suit (and trousers).....	14.50
Shoes (and repairs).....	15.00
Underwear.....	4.00
Night garments.....	1.50
Hats.....	2.00
Shirts.....	3.00
Stockings.....	2.50
Ties, handkerchiefs, etc.....	1.50
Total.....	<u>\$48.50</u>

Girl of 8 or 9 years—	
Top coat (and sweater).....	\$ 5.00
Shoes (and repairs).....	12.00
Underwaists and garters.....	1.50
Dresses (school and best).....	5.75
Petticoat (or bloomers).....	1.00
Night garments.....	1.50
Hats.....	1.75
Stockings.....	2.00
Ribbons and handkerchiefs.....	1.00
Umbrella.....	1.00
Underwear.....	.00
Total.....	<u>\$32.50</u>

Boy of 5 or 6 years—	
Top coat (and sweater).....	\$ 4.00
Shoes (and repairs).....	11.00
Suits (wash, best and coveralls).....	8.00
Rubbers.....	1.50
Underwaists and garters.....	1.50
Night garments.....	1.00
Hats (and caps).....	1.25
Waists (and blouses).....	2.00
Mittens, ties, handkerchiefs.....	.75
Stockings.....	2.00
Underwear.....	.00
Total.....	<u>\$33.00</u>

## REMARKS ON FOOD BUDGET.

Various dietaries with differing proportions of meats, vegetables, fats, etc., have been constructed and each totals nearly the same figure. The calorie requirements are slightly over 12,000 a week for a family of five, distributed as follows: man, 3,400; woman, 2,700; boy of thirteen or fourteen, 2,700; girl of eight or nine, 2,000; boy of five or six, 1,500. The figure for meat is a little lower than is actually found among the carmen's families, but it is quite probable that during war time the item for meat will become progressively lower.

FOOD	
Cereal.....	\$ 26.00
Vegetables.....	78.00
Fruit.....	41.60
Meat and meat substitutes.....	98.80
Flour.....	16.64
Bread.....	52.00
Fats.....	93.60
Sugar.....	23.40
Milk.....	87.36
Coffee and tea.....	16.00
Total.....	\$533.40

## REMARKS ON SUNDRIES.

The insurance and savings item is larger than actually occurs, due probably to the fact that expenses and wages do not at present permit saving. The item is conservatively low. Medical and dental care varies widely, but \$60 seems to be near the present average. The miscellaneous item is included because it actually exists.

SUNDRIES.	
Amusements (movies, vacations, picnics, etc.).....	\$ 30.00
Education and literature.....	11.00
Insurance and savings.....	130.00
Comforts (tobacco, candy, Christmas, etc.).....	30.00
Organizations.....	20.00
Dental and medical care.....	60.00
Incidentals (stamps, barbers, stationery, etc.).....	25.00
Household (furniture, laundry, tools, etc.).....	40.00
Miscellaneous (exigencies and waste).....	20.00
Total.....	\$366.00

## REMARKS ON RENT, ETC.

In some houses the water is not included in the rent. Gas has recently risen and the estimate is on the proposed raise.

RENT, ETC.	
Rent and water.....	\$184.00
Gas.....	20.00
Light.....	15.00
Fuel.....	60.00
Car fare.....	35.70
Total.....	\$314.70

### REMARKS ON THE RATE OF WAGES TO BE SET, BASED ON THE STANDARD OF LIVING.

The standard of living estimated for a carman's family is \$1,520 a year at prevailing prices. If the employe six years and over with the company averages 288 hours of work a month, then his rate of pay should be 43 cents an hour in order to earn the standard of living wage. If the company maintains the present differential for years of service in the employ, then a man five years in the service should receive 41 cents; one for four years, 40 cents; and so on, to 36 cents for the first six months of service.

Light may be thrown on the wage increase from another angle, that of the correlation of rising prices and rising wages. A survey recently conducted in Seattle by the departments of Economics and Sociology of the University of Washington, for the United States Government, showed that for the eighteen months since June 1, 1916, the cost of living, including rent, fuel, sundries, food and clothing, had risen 34 per cent, and figures based on various prices indicated a continued rise of considerable magnitude for 1918, despite the efforts of Mr. Hoover. The maximum hourly rate of wages for carmen, June 1, 1916, was 31 cents. If the carmen six years and over in the service maintain the same standard of living in October, 1917, that they had in June, 1916, the maximum rate should be 41.5 cents. This figure would represent a lowering of the standard of living from December 1, 1913, when the 31 cent rate went into effect, because the cost of living has risen more since December 1, 1913, than it has since June 1, 1916. This figure of 41.5 cents is estimated for October, 1917, a time when prices are less than they will be in the Spring of 1918. So even assuming a continuance of the same standard of living as formerly, the hourly wage should be somewhat above 41.5, probably several cents. Inquiry has recently been made of the foremost authority on prices in the United States as to the probable fall in prices after the war, or their probable continuance at a high level. The reply was that a definite prediction cannot be made, but the probabilities, he thought, were for continued high prices.

## 7.—HIGHER FOOD PRICES AND THE PROPER NUTRITION OF WORKINGMEN'S FAMILIES.

(Report of Professor Jaffa of the University of California.)

During September, 1917, an Arbitration Board which had been appointed to adjust the wages of employes of the street railways of Oakland, California, requested Professor M. E. Jaffa, of the College of Agriculture, University of California, to submit for their information a report regarding the increase in cost of food during the preceding ten years. As several other members of the faculty of the University had been asked for similar reports, Professor Jaffa decided to leave the matter of the total family income to be discussed by the economists and to emphasize in his report the purely nutritional side of the problem. He arranged a table showing the approximate amounts of the different staple foods which form the diet of the average family. He then calculated the cost of this diet for the preceding ten years, and made his results the basis of an analysis of the increased cost of living and of the effect of rising prices upon the physical well-being of the worker and his family.

"Food is no longer," he states, "considered as a mere appeaser of the appetite. It is now recognized, in its serious aspect, as a satisfier of the physiological needs of the body. These fundamental food needs do not vary with the income, but depend upon such things as growth, weight, and amount of work performed. It takes just as much milk to nourish the body of one baby as it does another, regardless of the father's earning capacity. A man engaged in heavy labor requires more food than does an office man, regardless of the difference in income. But the **DIET** is a different matter. One man may eat rib roast while another eats stew—but meat they both require. One may eat hot-house berries while the other eats dried apples—but fruit they both should have. In other words, a proper diet for any family should be drawn in right proportion and in adequate amounts from **all five food classes**, but for the family of small income the selection must be made, in large part, from the cheaper foods or grades of food in each class, and the quantity is usually found to be nearer to a minimum than can be considered desirable.

"The following table shows the effect of increased prices on the total food cost for a family of small income. It expresses the average of many dietary studies of such families and has been modified just enough to overcome undesirable deficiencies due to enforced privations, and to meet the **minimum** demands for health and efficiency.

"It can not be sufficiently emphasized that while this type of diet has been selected as a working basis, it is **not** therefore to be considered a sufficient or an approved diet. Only a certain proportion of people can maintain health on a minimum—which provides only that amount of energy which the body actually puts forth in the processes of living and working. It provides no safety factor, and allows for no individual differences. No person should be held down to a minimum when the appetite and apparent bodily needs seem to call for more. A minimum expresses the line below which it is dangerous to go. All the food which this diet calls for is **necessary**, but not **necessarily** all that is required.



TABLE SHOWING INCREASE IN COST OF FOOD FROM  
MAY, 1907, TO MAY, 1917.

MINIMUM DIET ON WHICH HEALTH CAN BE MAINTAINED FOR A WORKINGMAN, HIS  
WIFE AND THREE CHILDREN BETWEEN FOUR AND FOURTEEN YEARS OF AGE.

Food Materials.	Food and Cost for 1 Month.					Market Price per Pound.			
	Pounds	1907	1912	1916	1917	1907	1912	1916	1917
Class I—									
Meat and Fish.....	50	\$5.75	\$7.25	\$8.00	\$10.00	\$0.115	\$0.145	\$0.160	\$0.200
Milk.....	120	4.80	4.80	4.80	6.00	.040	.040	.040	.050
Eggs.....	6	.81	1.12	1.08	1.56	.135	.170	.180	.260
Beans.....	8	.40	.40	.40	1.60	.050	.050	.050	.020
Class II—									
Flour.....	60	1.88	1.92	1.92	4.80	.031	.032	.032	.080
Cereals.....	17	.49	.77	1.02	1.36	.029	.045	.060	.080
Macaroni.....	4	.28	.32	.32	.50	.070	.070	.080	.125
Rice.....	10	.60	.60	.60	.83	.060	.060	.060	.083
Class III—									
Potatoes.....	35	.70	1.05	1.05	2.17	.020	.033	.030	.062
Vegetables.....	55	1.38	1.65	1.65	1.65	.025	.030	.030	.030
Fruits.....	50	2.25	2.50	2.50	2.50	.045	.050	.050	.050
Class IV—									
Butter.....	8	2.29	2.55	2.40	3.60	.286	.320	.300	.450
Oils and Fats.....	10	1.35	1.90	2.00	2.50	.135	.176	.200	.250
Class V—									
Sugar.....	25	1.38	1.53	1.75	2.25	.055	.060	.070	.090
Extras—									
Coffee and Tea.....	2	.73	1.00	1.00	1.00	.20	.300	.300	.300
Sundries.....	..	2.00	2.30	2.50	3.00	....	....	....	....
Total, per month..		\$27.09	\$29.66	\$32.99	\$45.32				

Sundries include yeast, corn starch, cocoa, cheese, syrup, salt, etc.

A study of this table shows that the cost of food for the family diet here presented has gone up, in ten years, from \$27.00 to \$45.00—an increase of upwards of 67 per cent. Staggering as these figures are when considered in connection with a stationary income, the increase shown in the last year is by far most serious. It is quite evident that the increased cost of nearly \$18.23 shown in the table could not have been met by many families under discussion. It will be necessary, then, to consider what adjustments have been made, and the effect of these adjustments upon the health of the family.

Much has been accomplished by many people by substituting one food for another as prices have changed. Some of this has been legitimate and helpful—some has been unwise and detrimental.

The extent to which substitution can be practiced depends almost entirely upon the type of the original diet, and this, in turn, depends upon the income. Not only is the total supply of food more generous on the large income, representing the maximum for health rather than the minimum, but the distribution of foods in the various classes is different. On a low income, people can afford only a small quantity of the concentrated foods, meat, eggs, butter, and sugar, the largest proportion of their diet coming from the starchy foods which are "bulky," and furnish the cheapest form of nourishment for the money expended. As the income goes up and people are free to exercise their instinctive



choice, the use of meat, eggs, butter, sugar, etc., increases, and the starchy foods are decreased and replaced in part by the other class of bulky foods—fruits and vegetables, which are more expensive for the nourishment they contain, and are, therefore, not used freely by poorer people. We have, then, two very different types of diet to consider. Let us see what happens to each when prices rise:

#### MEAT.

When **meat** increases in price, the well-to-do, who have usually bought a large proportion of choice cuts, can substitute inferior ones on some days, use beans occasionally, or reduce their meat quantity somewhat. Where **cheap meats**, however, have been the rule, and where beans have **always** been used for economy, there is no recourse but to pay the price or go without. And when, at the same time, beans jump nearly three-hundred per cent, the detrimental form of substitution begins, and starchy foods and inadequate amounts of milk or cheese are substituted for protein. One food can not be used with safety to replace another **unless it is in the same class**, as each of the five classes have important and different uses in the body.

#### POTATOES.

Again, when potatoes increase in price, most people used rice or macaroni as a substitute, although potato is a **vegetable** and **not** a cereal food. Here again the well-to-do suffered no harm. Their supply of other vegetables, as well as fruit, was enough for their physiological needs. But the people on a minimum diet have always depended upon potatoes very largely to furnish that **fresh quality**, and those special minerals so important to health. They have never afforded much other vegetable, nor do these others furnish the amount of nourishment in addition to the hygienic values, that potatoes do. Therefore, people of small income suffered in health. That this form of substitution was detrimental was shown in several institutions where this form of economy caused a decided increase in the drug bills.

#### SUGAR.

**There is no cheap substitute for sugar**, and when this food became expensive, the quantity was reduced and **nothing** was substituted.

As the maximum and medium diets provide good amounts of all forms of concentrated foods, a moderate reduction in quantity of one kind, or several, can be made without injury to health. But where the diet is already low, the loss of nourishment is keenly felt, and when all other forms of concentrated foods are also expensive, no adequate substitution **can be made**.

The scheme works like this:

**Cereal** food forms the cheapest and largest part of the diet. The price rises, and the pocket book is strained.

**Meat** and beans increase in price, and people are told to eat more cereals. Result: more bulky food, unbalanced diet, less nourishment, but more expense.

**Butter** increases in price. The supply is **cut down**. People are told that other foods can provide the nourishment. Result: more bulk, less balance, and less nourishment.

**Sugar** increases in price. Amount is cut down and **nothing** is substituted.

**Milk** increases in price. Amount is cut down and **nothing** is substituted. Result: more loss of protein and of fat.

**Cereals** rise again. There is no cheaper food, and **nothing can be substituted**.

Where the income is small this process soon drains the diet of those foods which are most essential to health, and forces it down below the danger line.

The accompanying chart<sup>1</sup> will help to illustrate how the high food prices have affected the diets of families of varying incomes.

After pointing out many popular misconceptions as to the increased cost of living, Professor Jaffa concludes with an unusually strong point: "A great many persons," he states, "tend to ignore a small percentage of advance in price of a particular foodstuff which as a matter of fact may be very serious because of the importance of the food or the frequent use of it, while, on the other hand, great stress is often laid on a spectacular rise in price of a food which may be used only occasionally and, as a consequence, adds little to the total food cost of a family."

## 8.—INCREASED LIVING COSTS, 1916-1917.

An employer of labor requested the University of California Agricultural Experiment Station for an estimate of the increased cost of living which he might use as a basis for adjustment of wages with his employes. Accordingly, Professor M. E. Jaffa, to another branch of whose work reference has just been made, prepared a statement (which has been printed as a bulletin of the Agricultural Experiment Station) showing for an average family the increase in cost of living from May, 1916, to May, 1917.

"It is impossible," Professor Jaffa states, "to estimate the expenses of any family without knowing all the conditions, but there are certain fixed items of expense, and the percentage of increase in cost is known for others. These form a good basis for calculation in regard to the effect of high prices on the mode of living of a family of small income and will be discussed in turn. The accompanying table shows how the varying prices of foodstuffs affect the total food cost."

(1) See pages 4.

TABLE SHOWING INCREASE IN COST OF FOOD FROM  
MAY, 1916, TO MAY, 1917.

MINIMUM DIET ON WHICH HEALTH CAN BE MAINTAINED FOR A WORKINGMAN, HIS  
WIFE AND THREE CHILDREN BETWEEN FOUR AND FOURTEEN YEARS OF AGE.

	Food and Cost for 1 Month			Market Price per Pound.	
	Pounds.	1916	1917	May 1916	May 1917
Meat and fish.....	50	\$8.00	\$10.00	\$0.16	\$0.20
Milk.....	120	4.80	6.00	.04	.05
Eggs.....	6	1.08	1.56	.18	.26
Beans.....	8	.40	1.60	.05	.20
Flour.....	.60	1.92	4.80	.032	.08
Cereals.....	17	1.02	1.36	.06	.08
Macaroni.....	4	.32	.50	.08	.125
Rice.....	10	.60	.83	.06	.083
Potatoes.....	35	1.05	2.17	.03	.062
Vegetables.....	55	1.65	1.65	.03	.03
Fruits.....	50	2.50	2.50	.05	.05
Butter.....	8	2.40	3.60	.30	.45
Oil and fats.....	10	2.00	2.50	.20	.25
Sugar.....	25	1.75	2.25	.07	.09
Coffee and tea.....		1.00	1.00	.30	.30
Sundries.....		2.50	3.00		
First total.....		\$32.99	\$45.32 per	month.	
Extra for man.....		2.55	3.25		
Second total.....		\$35.54	\$48.57 per	month.	
Per person per day.....		.237	.324		

"The first total is adequate if the man of the family is engaged in ordinary labor. The second total allows for 1,000 calories extra food for heavy work. If the labor performed is that of a lumberman or harvest hand, a further increase of three and a quarter dollars is necessary.

"Additional children will add the following amounts to the food budget:

Between 3 and 6 years . . . \$ 5.70 per month  
 Between 6 and 9 years . . . 6.75 per month  
 Between 9 and 13 years . . . 7.90 per month.  
 A girl over 13 years . . . . . 9.00 per month  
 A boy over 13 years . . . . . 10.50 to \$11.00 per month.

"The item of 'Sundries' includes such articles as corn starch, syrup, cheese, salt, pepper, mustard, yeast, etc.

"The diet here presented expresses the minimum on which health and efficiency can be maintained. It admits of many rearrangements between the staples of the same class, according to the preferences of people of different nationalities; more macaroni, less rice; more vegetables, less fruit; more meat and less milk; but no appreciable variations could be made in the cost without a corresponding decrease in the nourishment. In view of this fact the increase in cost of 33½ per cent is serious.

"It is unnecessary to say that many families live on much less than the diet given, which may account for a large proportion of stunted children, many diseases, early death or inefficiency.

"**Clothing.**—This item of expense varies greatly according to the ages of the children and the ability of the family to live up to any kind of a standard. But the increase averages 33½ per cent. The most

important item under this heading is shoes, the price of which has increased in greater proportion than that of other articles of clothing. It is impossible to reduce the cost of shoes, as can be done with other kinds of wearing apparel, by making up cheap material at home.

"Shoes show an increase in price of 50 per cent at present, but this will undoubtedly be changed to 100 per cent in the near future when the retailers are obliged to replace their stock at the ruling wholesale prices. The following estimate of the shoe cost for the family considered is conservative and shows an increase of 50 per cent for the past year.

#### COST OF SHOES PER MONTH FOR FAMILY OF FIVE.

	1916	1917
Shoes.....	\$3.25	\$5.00
Repairs.....	2.00	3.00
	\$5.25	\$8.00

"**Rent.**—The prices paid for rent in cities by families of small income from \$12 to \$17, so that \$15 seems a fair average for the budget of the family.

"Since the food cost is often 40 or 50 per cent, and the rent 20 per cent of small incomes, and since clothing, which often takes the lion's share of the balance, has increased  $33\frac{1}{3}$  per cent, it would seem that enough data are at hand to warrant a preliminary budgeting for a family with an assumed income of \$75 a month.

	1916	1917
Rent.....	\$15.00	\$15.00
Light.....	1.50	1.50
Fuel.....	3.00	3.00
Food.....	33.00	45.00
Shoes.....	5.25	8.00
	\$57.75	\$72.50
Balance.....	17.25	2.50
Income.....	\$75.00	\$75.00

"In 1916 there was a balance of \$17.25 a month to cover such other expenses as

Insurance	Clothing (except shoes)	Vacation
Organization dues	School incidentals	Recreation
Drugs	Household upkeep	Amusements
Doctor bills	Church support	Incidentals
Dentist bills	Car fares	Emergencies

"In 1917 there is \$2.50 a month left to cover this long list of items, many of which are unavoidable, others urgent, and few of which can be omitted.



"The higher prices have in all probability been met by a reduction in the food supply of the family. Rent **must** be paid, shoes and some little clothing **must** be bought, other incidentals must be met, but food, which is the largest item of expense and is susceptible of manipulation, can generally be reduced. This should **not** be done at the expense of the growth and development of the children and the efficiency and endurance of the adults."

### 9.—A MINIMUM BUDGETARY ESTIMATE FOR PACIFIC COAST WORKERS.

Dr. Jessica B. Peixotto, of the faculty of the University of California, in October, 1917, prepared a detailed estimate of the minimum outlay required for a workingman's family of husband, wife, and three children of school age, in San Francisco. This amount she placed at \$110 a month with the statement that it covered a minimum standard of wholesome living and not mere subsistence.

"The typical worker in San Francisco," she states in her explanatory comment, "belongs to a class which insists upon having food enough to provide a palatable and somewhat varied dietary; shelter and clothing that conforms to the traditional idea of the 'decencies' rather than the 'necessities;' some income to pay for schooling the children, for relaxation in leisure hours, and something to provide against the risks of ill-health, invalidity and death. Though the total looks large, it is actually little above Miss Byington's estimates in her Homestead Study, considering the rise in the prices of food and clothing. Inspection of the individual items will show that very modest sums have been assigned to each class of wants. The housewife who keeps within the amounts specified must still have to be a cautious purchaser, and capable in preparing foodstuffs and industrious in making clothing.

"It would seem, then, that the present scale of wages is such that a family of man, wife, and three children of school age cannot be maintained without getting into debt or receiving aid on much less than \$110 a month. When the normal breadwinner is paid less than this sum, one of three things, any one of them harmful for the group and for the community, is likely to happen:

"1. Other members of the family will have to work to eke out the income, or

"2. There will be less food than is necessary for the men to do efficient work. The risks of ill-health to all members of the group and the consequent costs to the group and to society are equally plain. Or

"3. The group must go without many of the articles noted under Sundries and House Operations. The probabilities of stupidity, early breakdown, and dependency are evident, for the expression of the more subtle capacities, the capacity for foresight, for generosity, for sociability, depends on having some money for 'Sundries.' One of the most important differences between social dependents, potential or actual, and self-supporting citizens is that social dependents are willing to go without the money for 'Sundries' and capable men and women recognize the imperative need for the money that will buy those things the term covers."



## LIVING EXPENSES FOR FAMILY OF FIVE

Items.	Month.	Year.	Total.
Rent.....	\$20.00	\$240.00	\$240.00
House Operation.....	11.50	138.00	138.00
Fuel.....	3.00	36.00	
Light.....	1.50	18.00	
Laundry.....	.25	3.00	
Soap, matches, etc.....	1.00	12.00	
Garbage removal.....	.25	3.00	
Furnishings—maintenance and additions.....	2.50	30.00	
Telephone.....	1.50	18.00	
Incidentals—occasional help, repair of house.....	1.50	18.00	
Food.....	45.00	540.00	540.00
Clothing.....	288.40	288.40	288.40
Man.....	74.50		
Wife.....	73.90		
Children (3, all under 12 years).....	140.00		
Sundries.....	22.50	270.00	270.00
Car fare.....	4.00	48.00	
Medicines.....	1.25	15.00	
Doctors and dentists.....	5.00	60.00	
Savings (for invalidity).....	5.00	60.00	
Organization dues.....	1.25	15.00	
Insurance (burial).....	2.00	24.00	
Stamps and stationery.....	.25	3.00	
Newspapers, school supplies, etc.....	1.25	15.00	
Tobacco, drinks, etc.....	1.00	12.00	
Church, charity, etc.....	.50	6.00	
Gifts (Christmas, etc.).....	1.00	12.00	
Grand total.....			\$1,476.40

## EXPENDITURE FOR CLOTHING.

MAN		WIFE.		CHILDREN (3 under 12)	
Article.	Price.	Article.	Price.	Article.	Price.
1 business suit (@ \$20 lasts 2 years).....	\$10.00	1 street dress (@ \$20 lasts 2 years).....	\$10.00	9 suits or dresses.....	\$25.00
1 overcoat (@ \$20 lasts 5 years).....	4.00	1 house dress.....	3.00	3 coats.....	15.00
1 extra trousers.....	5.00	Waists.....	5.00	15 sets of underwear.....	15.00
4 shirts.....	3.00	Stockings.....	3.00	24 pairs stockings.....	8.00
5 collars.....	.75	Aprons.....	.90	3 to 5 hats.....	5.00
2 cravats.....	.50	Underwear.....	5.00	Sundries: Cravats, ribbons, mufflers, sweaters, aprons, rompers, etc.....	5.00
3 underwear.....	5.00	Hats.....	5.00	16 to 18 pairs shoes.....	50.00
2 nightwear.....	2.00	Gloves.....	1.50	Repairs.....	17.00
6 pairs sox.....	1.50	Coat (@ \$20 lasts 2 yrs.).....	10.00		
2 pairs shoes.....	10.00	Handkerchiefs.....	1.50		
Repairs on shoes.....	3.75	2 pairs shoes.....	10.00		
1 pair slippers, gum shoes, etc.....	1.25	Repairs on shoes.....	3.75		
Handkerchiefs.....	1.00	House shoes.....	3.25		
1 hat (@ \$3.00 lasts 2 years).....	1.50	Sundries: Hairpins, veils, toilet articles, repairs of clothing, frills, etc.....	5.00		
1 cap.....	.75	1 ceremonial dress (@ \$21 lasts 3 years).....	7.00		
Sundries: Muffler, sweater, gloves, purse, watch fob, umbrella, etc.....	5.00				
	\$65.00		\$73.90		\$140.00

## SUMMARY TABLE.

Items.	Amounts.
Rent.....	\$ 240.00
House operation.....	138.00
Food.....	540.00
Clothing.....	288.40
Sundries.....	270.00
Grand total.....	\$1,476.40

10.—STUDY MADE ON THE PACIFIC COAST BY THE LABOR  
ADJUSTMENT BOARD OF THE UNITED STATES  
SHIPPING BOARD OF THE UNITED STATES  
EMERGENCY FLEET CORPORATION.

One of the most recent budgetary investigations was made on the Pacific Coast during October, 1917, by the Shipbuilding Labor Adjustment Board of the United States Shipping Board Emergency Fleet Corporation. The investigation was made for the purpose of securing an equitable basis for wage increases to workers in the shipyards of Seattle, Portland and San Francisco.

The period determined upon to make a study of the advance in the cost of living of shipyard employes on the Pacific coast was the fifteen months beginning with June, 1916, and ending with September, 1917. The pre-war date of June 1, 1916, was selected because an agreement as to wages and working conditions was entered into by employers and employes in Seattle on that date. This agreement expired on July 31, 1917, and its termination was the occasion for the demand of the employes in that city and elsewhere for higher rates of pay.

With the determination of the principle that money wages should follow the cost of living so that real wages and standards would be unimpaired by the war, it inevitably followed that if the cost of living was practically the same in the different shipbuilding localities that the award of the Board might be extended to all localities and a uniform wage scale established. The evidence submitted to the Board, together with the results of its own direct investigations, soon convinced the Board that there was no variation between localities of sufficient importance to justify the establishment of any differentials. Food prices in Seattle, Portland and San Francisco were practically the same. Those in Los Angeles were somewhat relatively higher, but it was considered that this was more than offset by lower fuel and clothing costs.

The extensive investigation and the tabulation and weighting of price statistics incident to the investigation was made possible by the active cooperation with the Staff of the Board members of the faculty of the Department of Economics in the University of Washington, and also by the cooperation of the faculty of the University of California. Five members of this faculty of the University of Washington, one of whom was a recognized specialist in cost of living statistics, and another in food prices and marketing, did field work in collecting comparative retail prices of foodstuffs, clothing, rents, fuel and sundries. They visited a large number of dealers and made actual transcriptions from their records. These price data were checked afterwards with the exhibits presented at the public hearings of the Board, by tradesmen and others.

After these price data were collected from original sources, a large amount of work was necessary in averaging and weighting them in order to make up a comparative budget for a representative workingman's budget. This work was done under the direction of the economists already referred to, with the assistance of some of their students in statistics. Prices from individual tradesmen were added and averaged.

Relative prices in October, 1917, as compared with June, 1916, were then worked out. Weights were then given to the different items of expense as follows:

1. Articles of food and fuel according to the amounts shown as expended in the Washington State Bureau of Labor budget.
2. Different articles of clothing, according to sworn statements of expenditure made by the Seattle street railway workers to their wage arbitration board.
3. Sundries according to the practice of Chapin and other students.

The proportion which expenditures for each group of articles consumed bore to the total expenditures of a workingman's family was then determined by accepting the results of an actual investigation made on the Pacific coast in 1901, by the United States Bureau of Labor. The percentage of increase in each class of commodities and the weights given to each group were as follows:

Classes of expenditures.	Weight or per cent of total budget.	Increase in weighted prices, June 16-Sept. 17.
Food.....	40	46%
Rent.....	18	5½%
Clothing.....	14	51%
Sundries.....	15	22%
Fuel.....	4	40%

As a net result of the weighting of different commodities, and of the several classes of commodities entering into the consumption of workingmen's families, it was found by the Board that the general increase in the cost of living for the period under consideration, June, 1916-October, 1917, amounted to 31 per cent, and rates of pay were advanced accordingly.

# 11.—BUDGET OF THE ANNUAL COST OF LIVING, 1914-1917, COMPILED BY THE STATE BUREAU OF LABOR, OLYMPIA, WASHINGTON.

Beginning with April, 1914, the Washington State Bureau of Labor has instituted during the month of April of each year a special investigation of prices of food and fuel. Statistics are secured by field agents from about forty retail dealers in as many towns and cities throughout the State. As to the relative importance of different items of expenditure the Labor Commission states that "when the budget was first prepared, a great many families were interviewed as to varieties of articles and quantities thereof necessary for a family of five during a period of one year, so that in this particular the average amounts used are also accurate.

"A careful perusal will also convince that the quantities estimated are conservatively low. Flour, 686 pounds for a year, means only about six ounces per day per person, for a family of five; potatoes, 800 pounds means about seven ounces per day. Flesh meat and fish allowances are very small."

The budgetary table is divided into three sections: one showing the cost for groceries, a second the costs of flesh meat and fish, and a third, fuel costs. Comparative costs for two of the largest industrial cities of the State, Seattle and Spokane, are shown in the table below for the four years, 1914-1917.

TABLE SHOWING THE ANNUAL COST OF FOODSTUFFS AND FUEL  
FOR A FAMILY OF FIVE.

[Survey made in month of April of each year indicated.]

Quantity and article.	Seattle.				Spokane.			
	1914	1915	1916	1917	1914	1915	1916	1917
260 lbs. sugar, granulated								
cane.....	\$13.00	\$16.90	\$22.36	\$23.92	\$14.04	\$17.68	\$21.06	\$24.96
14 sacks flour, fancy								
patent, 49-lb.....	19.08	25.90	21.84	38.74	19.08	26.00	20.30	41.02
2 sacks corn meal, 10-lb	.65	.68	.68	.90	.68	.74	.68	1.00
75 lbs. rolled oats, bulk.	3.56	4.05	3.75	3.98	3.25	3.60	3.75	4.43
8 cwt. potatoes, white.	9.00	17.40	15.12	34.00	5.56	11.71	12.00	32.80
25 lbs. beans, navy....	1.85	1.93	2.38	4.18	1.75	1.95	2.00	3.48
26 lbs. onions, dry.....	1.69	.73	.91	3.17	1.56	.83	.78	3.35
12 lbs. barley, pearl....	.84	1.00	1.00	1.12	1.02	1.04	.96	1.20
10 lbs. split peas.....	.70	.90	.90	.97	.85	.99	.95	1.13
22 lbs. rice, Japan.....	1.41	1.61	1.87	1.61	1.71	1.89	1.76	2.00
80 lbs. butter, creamery	25.00	23.52	30.48	36.00	26.80	26.32	30.80	37.04
25 lbs. butter, ranch....	6.88	6.25	10.00	10.73	6.67	6.60	7.50	10.63
30 lbs. soda crackers....	3.00	2.79	2.85	3.84	2.70	2.97	3.15	4.56
80 doz. eggs, fresh.....	19.52	19.76	22.00	28.88	20.00	19.20	20.00	31.04
4 lbs. macaroni.....	.36	.35	.30	.33	.39	.35	.32	.30
20 lbs. cheese, American	5.00	4.62	5.00	5.92	5.25	4.66	5.20	6.00
6 lbs. cheese, imp. Swiss	2.18	2.28	3.12	2.28	2.20	2.50	2.40	3.90
12 lbs. raisins, seedless..	1.29	1.43	1.57	1.60	1.27	1.42	1.54	1.90
20 lbs. dried prunes.....	2.40	2.58	2.62	2.66	2.35	2.50	2.16	2.76
8 doz. lemons.....	1.92	1.65	1.68	1.94	2.30	1.66	1.70	2.00
3 gals. syrup, corn.....	1.80	1.67	1.65	1.97	2.23	1.91	1.92	2.35
10 lbs. comb honey.....	1.94	1.91	1.83	1.92	1.90	1.75	1.63	1.83
3 gals. pickles, sour....	1.65	1.82	1.95	1.52	1.61	1.60	2.10	2.37
3 gals. vinegar, cider....	1.39	1.20	1.18	1.15	1.16	1.11	1.17	1.15
18 cans canned tomato-								
oes, No. 3.....	2.70	2.65	2.52	2.93	2.70	2.70	2.86	3.60
22 cans canned corn,								
No. 2.....	2.24	2.42	2.75	3.12	2.82	2.40	2.64	3.39
20 cans canned peas,								
No. 2.....	2.60	2.64	2.80	2.76	2.80	2.58	2.66	2.60



TABLE SHOWING THE ANNUAL COST OF FOODSTUFFS AND FUEL  
FOR A FAMILY OF FIVE—Concluded.

[Survey made in month of April of each year indicated.]

Quantity and article.	Seattle.				Spokane.			
	1914	1915	1916	1917	1914	1915	1916	1917
9 cans canned beans, No. 2.....	1.24	1.22	1.07	1.31	1.26	1.22	1.18	1.42
3 lbs. baking soda.....	.25	.27	.29	.23	.30	.27	.26	.29
9 lbs. baking powder, cream tartar.....	4.05	4.09	4.28	4.28	4.05	4.08	3.83	4.05
12 lbs. corn starch.....	1.06	1.08	1.15	1.04	1.20	1.14	1.02	1.30
50 lbs. carrots.....	.59	.95	1.06	1.65	.59	.80	.85	1.65
35 lbs. cabbage.....	1.40	1.37	1.40	2.73	1.66	1.51	.88	3.40
40 lbs. coffee, medium grade.....	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
10 lbs. tea, medium grade.....	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
12 pts. tomato catsup.....	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
20 lbs. salt.....	.67	.67	.67	.67	.67	.67	.67	.67
85 bars soap.....	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
Vegetables.....	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Fruit.....	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Milk, fresh and condensed	33.00	33.00	33.00	36.50	33.00	33.00	33.00	36.50
Total for groceries.....	\$236.66	\$254.04	\$268.78	\$331.30	\$238.13	\$252.10	\$256.43	\$342.82
Weekly average.....	4.55	4.89	5.17	6.37	4.58	4.85	4.93	6.59
1914 Relative per- centages.....	100.	107.	114.	140.	100.	106.	108.	144.
74 lbs. lard.....	\$11.66	\$11.54	\$11.10	\$19.24	\$11.10	\$10.80	\$11.69	\$21.09
5 cans canned oysters, No. 2.....	1.22	1.18	1.05	1.02	1.19	1.15	1.00	1.09
5 cans canned clams, No. 1.....	.69	.64	.63	.71	.69	.68	.66	.73
24 lbs. canned salmon, No. 1.....	3.90	4.51	4.32	5.11	4.80	3.91	3.89	5.78
40 lbs. smoked bacon.....	10.90	11.04	11.20	14.12	10.16	9.04	9.40	13.84
20 lbs. smoked ham.....	4.35	4.28	5.00	6.14	4.28	3.72	4.24	6.64
10 lbs. smoked shoulder.....	1.63	1.47	1.42	2.50	1.53	1.40	1.64	2.25
150 lbs. roast beef.....	30.00	31.20	31.50	35.85	24.00	29.70	32.63	25.80
100 lbs. boiling meat.....	12.00	11.80	12.40	12.50	9.60	10.90	12.50	12.70
120 lbs. steak.....	22.40	22.32	22.56	27.96	21.84	22.56	24.00	25.56
40 lbs. veal.....	7.76	7.76	7.28	8.72	7.28	9.28	7.72	9.68
50 lbs. mutton.....	8.00	9.30	10.70	10.35	6.25	9.20	10.45	11.10
60 lbs. pork.....	11.00	10.86	10.86	14.76	9.72	10.20	10.62	15.12
25 lbs. poultry.....	4.40	5.33	5.20	8.48	4.00	4.23	4.73	6.45
68 lbs. fresh fish.....	7.62	8.30	11.22	16.25	8.50	9.11	12.65	11.76
Total for meat and fish.....	\$137.53	\$141.53	\$146.44	\$183.71	\$124.94	\$135.88	\$147.82	\$169.59
Weekly average.....	2.64	2.72	2.81	3.53	2.40	2.61	2.84	3.26
1914 Relative per- centages.....	100.	103.	106.	134.	100.	109.	118.	136.
4½ cords wood, fir, stove length.....	\$25.52	\$29.25	\$27.45	\$27.56	\$35.46	\$31.95	\$33.75	\$37.50
4 tons coal.....	18.75	18.90	18.75	20.13	25.50	24.99	25.50	29.00
Total for fuel.....	\$44.27	\$48.15	\$46.20	\$47.69	\$60.96	\$56.94	\$59.25	\$66.50
Weekly average.....	.85	.92	.89	.92	1.17	1.09	1.14	1.28
1914 Relative per- centages.....	100.	109.	104.	108.	100.	93.	97.	109.
Totals:								
Groceries.....	\$236.66	\$254.04	\$268.78	\$331.30	\$238.13	\$252.10	\$256.43	\$342.82
Meat and fish.....	137.53	141.53	146.44	183.71	124.94	135.88	147.82	169.59
Fuel.....	44.27	48.15	46.20	47.69	60.96	56.94	59.25	66.50
Grand total.....	\$418.46	\$443.72	\$461.42	\$562.70	\$424.03	\$444.92	\$463.50	\$578.91
Weekly average.....	8.04	8.53	8.87	10.82	8.15	8.55	8.91	11.13
1914 Relatives.....	100.	106.	110.	134.	100.	105.	109.	137.

THE COMPARATIVE TOTALS FOR THE PERIOD 1914-1917 BY GROUPS OF ARTICLES, FOR SECTIONS OF THE STATE, OTHER THAN THE ABOVE NAMED CITIES, ARE SHOWN BELOW:

Classes of Expenditures.	Exclusive of Seattle, Tacoma and Spokane.											
	Southwestern.				Northwestern.				Eastern.			
	1914	1915	1916	1917	1914	1915	1916	1917	1914	1915	1916	1917
Groceries.....												
Total.....	\$230	\$247	\$247	\$331	\$231	\$243	\$254	\$328	\$232	\$247	\$254	\$333
Weekly averages.....	4.42	4.75	4.75	6.37	4.45	4.67	4.88	6.31	4.45	4.75	4.89	6.41
1914 relative percentage	100	107	107	144	100	105	110	142	100	107	110	144
Meat and fish:												
Total.....	\$137	\$134	\$138	\$175	\$134	\$130	\$138	\$184	\$138	\$138	\$143	\$175
Weekly average.....	2.64	2.59	2.65	3.36	2.58	2.50	2.64	3.54	2.66	2.67	2.74	3.36
1914 relative percentage	100	98	101	127	100	97	102	137	100	100	103	126
Fuel:												
Total.....	\$39	\$43	\$40	\$28	\$51	\$45	\$44	\$48	\$59	\$56	\$57	\$61
Weekly average.....	0.74	0.83	0.77	0.54	0.99	0.87	0.86	0.93	1.14	1.08	1.09	1.18
1914 relative percentage	100	111	104	73	100	88	87	94	100	95	96	103
All commodities:												
Grand total.....	\$406	\$425	\$425	\$534	\$417	\$418	\$436	\$560	\$429	\$442	\$454	\$569
Weekly average.....	7.80	8.17	8.17	10.27	8.02	8.04	8.38	10.78	8.25	8.50	8.72	10.95
1914 relative percentage	100	105	105	132	100	100	105	134	100	103	106	133

(Cents in annual expenditures have been omitted.)

## 12.—COST OF A MINIMUM FOOD SUPPLY FOR A REPRESENTATIVE CITY FAMILY.

Inspector Graef, of the Department of Health, New York City, in October 19, 1917, made a careful comparison of the costs of the various elements in a standard dietary in the largest cities of the United States. He found that the cheapest wholesome dietary for a family of five (man, wife, and three children), cost \$9.67 a week in New York City, \$9.25 in New Orleans, \$9.14 in Boston, \$9.12 in San Francisco, and \$9.89 in Chicago. The average for 24 cities and towns in the United States was \$9.43.

The menus provided at these figures, however, were not especially tempting (see Menu No. 1 which follows), and a really palatable dietary, it was estimated, would cost approximately 25 per cent more than the figures just quoted, or \$12.95 a week in New York City, \$12.59 in Chicago, \$12.45 in Boston, \$11.92 in New Orleans, and \$11.46 in San Francisco. The average for 24 cities throughout the United States was \$12.68 a week. On an annual basis this would make a minimum food cost for a representative family from \$489.36 to \$659.36. The latter figures are more representative, as they contain a considerable proportion of really palatable foods. The detailed report of Inspector Graef was as follows:

"With a chart of retail prices throughout the United States as basis (see American Food Journal, September, 1917), the attached weekly family food budget was calculated for a New York City family as compared with a family living in one of several other large cities.

"The family—a typical one—consists of a man (at active work similar to that of average city liver), a woman and three children. According to the Atwater Standard they would require:

Man.....	3500 calories per day.
Woman.....	2500 calories per day.
Girl (16 years).....	2500 calories per day.
Child (12 years).....	2250 calories per day.
Child (8 years).....	1750 calories per day.

(5) ...22500

2500 average daily requirement.

"From 10 to 15 per cent of these calories must be protein or tissue-building foods.

"Menus No. 1, which follows, consists of low cost foods of high nutritious value, selected not only with a view to the requirements of a ration, balanced as far as food values, but also a selection to satisfy the palate. The meat allowed would, in all probability, not be sufficient for the man of the family; where this is true, meat has been allowed for him in shape of ham sandwich, to be taken at midday meal—presumably 'carried to work.'

"Menus No. 2 consists of foods chosen more essentially for attractiveness and with a more liberal allowance of meat.

**MENUS NO. 1.****Breakfast****Dinner****Supper****MONDAY**

Oatmeal  
Rye Bread  
Oleo, Milk

Bean Loaf  
Steamed Rice  
Apple Tapioca  
Milk

Prune Sauce  
Corn Dodger  
Cocoa, Milk  
Tea

**TUESDAY (WHEATLESS AND MEATLESS DAY)**

Cornmeal  
Rye Bread, Milk  
Oleo, Sugar, Coffee

Brazilian Bean Soup  
Beet Tops  
Rye Bread, Oleo  
Prunes, Milk

Junket  
Caramel Sauce  
Rye Bread  
Tea

**WEDNESDAY**

Oatmeal and Prunes  
Muffins  
Milk, Oleo, Coffee

Rice with Cheese  
Peanut Butter  
Bread, Oleo  
Dried Peaches

Pea Soup  
Corn Bread  
Oleo, Apple Sauce  
Milk

**THURSDAY**

Hominy, Coffee  
Corn Bread, Oleo  
Milk

Macaroni and Cheese  
Apple Sauce  
Gingerbread  
Milk

Cream of Tomato Soup  
Bread  
Oat Wafers  
Prune Sauce

**FRIDAY**

Cornmeal Mush  
Syrup for adults  
Milk for children  
Toast and Oleo  
Coffee

Hashed Cod  
Oatmeal Wafers  
Milk, Bananas

Lima Beans, Scalloped  
Graham Bread  
Peaches  
Milk

**SATURDAY**

Hominy

Baked Peas and Pork  
Cornbread and Rice  
(steamed with milk)  
Apple Sauce  
Milk

Cream Toast, Cheese  
Stewed Prunes  
Milk for children

**SUNDAY**

Oatmeal

Baked Corn and Beans  
and Cheese  
Rice Pudding with  
Prunes

Baked Bananas  
Cornmeal Muffins  
Oleo, Milk



**WEEK'S MARKET LIST FOR MENUS NO. 1.**  
**PRICES IN CERTAIN CITIES.**

Kind of food.	New York City.	Average of 24 cities throughout U. S.	Boston.	Chicago.	New Orleans.	San Francisco.
Canned foods.....	\$0.361	\$0.331	\$0.340	\$0.350	\$0.350	\$0.300
Cereals.....	2.993	3.032	2.109	3.289	2.985	2.036
Dried fruits.....	.999	.949	.930	.894	.905	.853
Fruits.....	.195	.195	.195	.195	.195	.195
Sugar and syrup.....	.389	.422	.391	.409	.393	.428
Fats.....	.606	.610	.600	.640	.580	.700
Dairy Products.....	2.392	2.011	2.878	2.347	2.134	2.048
Vegetables.....	.709	.739	.769	.760	.685	.674
Meats and fish.....	.937	.901	.850	.917	.939	.810
Condiments.....	.90	.90	.90	.90	.90	.90
	\$9.672	\$9.430	\$9.148	\$9.891	\$9.256	\$9.129

**WEEK'S MARKET LIST AND ITS FOOD VALUE**  
**FOR MENUS NO. 2.**

Kind of foods.	Total Calories.	Protein grams.
Canned goods.....	122.2	6.46
Cereals.....	42272.0	1391.06
Dried fruits.....	5716.0	47.60
Sugars, etc.....	7560.5	24.48
Fats.....	11845.0	.....
Dairy products.....	10355.2	555.87
Vegetables.....	3990.5	156.05
Meat and fish.....	5643.5	730.21
Condiments.....	No food value	.....
	88049.9	2961.73
Calories per gram.....		X 4
Total protein calories.....		11846.22

**MENUS NO. 2.****Breakfast**

Apple Sauce  
 Rolled Oats  
 Codfish Balls  
 Coffee, Bread, Oleo

**Dinner****MONDAY**

Meat Balls  
 Rice, Boiled Onions  
 White Sauce  
 Bread, Oleo  
 Apple Betty

**Supper**

Prune Sauce  
 Gingerbread  
 Tea, Oleo

**TUESDAY (WHEATLESS AND MEATLESS DAY)**

Hominy  
 Scrambled Eggs  
 Coffee, Bread, Oleo  
 (rye)

Scotch Barley Soup  
 Cheese Fondue  
 Beet Tops  
 Rye Bread, Oleo  
 Rice Pudding

Peaches  
 Oatmeal  
 Macaroons  
 Cocoa

**WEDNESDAY**

Shredded Wheat  
 Scrambled Eggs  
 Coffee, Bread, Oleo

Planked Steak  
 Onions  
 Bread, Oleo  
 Apple Tapioca

Apple Sauce  
 Cookies  
 Bread  
 Tea, Oleo

**THURSDAY**

Rice, Prune Sauce  
 Cream Toast  
 Coffee, Bread, Oleo

Stewed Beans  
 Tomato Sauce  
 Cornbread, Oleo  
 Apple Cake  
 Cornstarch  
 Sauce

Prune Loaf  
 Milk  
 Tea, Bread  
 Oleo

**FRIDAY**

Rollled Oats  
 Codfish Balls  
 Coffee, Bread, Oleo

Baked Fish  
 Lettuce  
 French Dressing  
 Prune Jelly

Fried Hominy  
 Syrup  
 Peach Sauce  
 Tea, Bread  
 Oleo

**SATURDAY**

Cornmeal, Apple Sauce  
 French Sauce  
 Coffee, Bread, Oleo

Bean Loaf  
 Tomato Sauce  
 Scalloped Potatoes  
 Peach Pie  
 Bread, Oleo

Junket  
 Oatmeal  
 Macaroons  
 Tea, Bread, Oleo

**SUNDAY**

Hominy  
 Boiled Eggs  
 Coffee, Bread, Oleo

Roast Leg Lamb  
 Beet Tops  
 Potatoes  
 Chocolate Pudding  
 Bread, Oleo

Cornmeal  
 Souffle  
 Bread, Oleo  
 Cocoa

## WEEK'S MARKET LIST FOR MENUS NO. 2.

Kind of food.	New York City.	Average of 24 cities throughout U. S.	Boston.	Chicago.	New Orleans.	San Francisco.
Canned goods.....	\$0.185	\$0.177	\$0.180	\$0.200	\$0.200	\$0.150
Cereals.....	2.943	3.144	2.202	3.153	3.022	2.902
Dried fruits.....	.690	.650	.670	.626	.625	.605
Sugar and syrup.....	.515	.570	.515	.537	.540	.581
Dairy products.....	3.340	3.343	3.925	3.165	2.801	2.950
Vegetables.....	.665	.673	.765	.685	.660	.582
Meats and fish.....	3.229	2.717	2.834	2.834	2.409	2.284
Condiments.....	.110	.110	.110	.110	.110	.110
Total cost of food budget...	\$12.953	\$12.685	\$12.451	\$12.593	\$11.929	\$11.460

### 13.—REPORT ON THE INCREASED COST OF LIVING FOR AN UNSKILLED LABORER'S FAMILY IN NEW YORK CITY.

(Prepared by the Bureau of Personal Service of the Board of Estimate and Apportionment, New York City,  
February, 1917.)

#### INTRODUCTORY STATEMENT.

In February, 1915, the Bureau of Personal Service, in conjunction with the Bureau of Municipal Research, made a study of the cost of living for an unskilled laborer's family. After careful consideration of the average size of families among laborers in general, in the United States, in the City of New York, and among the rank and file of the Department of Street Cleaning in particular, it was decided to select for purposes of study a family consisting of five members, a wage-earner, his wife, and three children of school age, who could not be expected to contribute anything to the family support. It was decided to fix the sex and ages of the children as follows:

Boy..... 13 years  
 Girl..... 10 years  
 Boy..... 6 years

The conclusion drawn from the report was that with less than \$840 a year an unskilled laborer's family of five persons could not maintain a standard of living consistent with American ideas. As a practical application of this conclusion, the Bureau of Personal Service recommended no maximum rate for the rank and file of the Department of Street Cleaning and for other comparable employments below \$840.

The subsequent changes in the rates for sweeper in the Department of Street Cleaning will serve to illustrate the application of standardization and minimum wage principles to unskilled laborers in the city service. The flat rate paid to sweepers in the Department of Street Cleaning up to January 1, 1915, was \$780. In Spetember, 1914, a range of salary of from \$720 to \$816 had been recommended tentatively by the Bureau of Personal Service. Increases to the rate of \$792 were actually in-

corporated in the annual tax budget for 1915. As a result of the minimum wage study, the range of salary finally recommended for sweepers was from \$720 to \$840 with increases of \$24 after not less than one year of service. This salary range was based upon the assumption that a sweeper entered the department with little or no family responsibility and at a slightly lower salary than the average pay for similar labor in private employment. Thereafter his salary would be increased after each year or two years of satisfactory service up to the point at which his family obligations were greatest. At this point his salary rate should approximate the minimum cost of decent living. In order to apply this range of salary successfully from the point of view of the family obligations of the laborer and the pension obligations of the city, it would have been necessary to limit further the age at which laborers would enter the city service. This would be impossible under present labor conditions. It will probably be impossible in the future to have the entering age so low that laborers coming into the service will be without family responsibilities. It must therefore be admitted that the original principle of fixing the minimum wage as the maximum of the scale was too conservative.

At the time the original study was made, market conditions were normal and satisfactory unskilled labor service could be purchased at rates below \$2 per day. Before January 1, 1917, market conditions had changed to such an extent that not only was the Department of Street Cleaning unable to obtain sweepers at the minimum rate of \$720, but large numbers of sweepers and other employes of corresponding rank at higher rates were leaving the service to accept employment in private concerns which had been forced to pay much higher daily rates on account of conditions arising from the war. In order that the city also might meet these market conditions, it was necessary in February, 1917, to raise the minimum rate for sweepers to \$792. Similar increases in minimum rates were made in the case of other employes. Within less than a month after these increases were made, the following statement was made in a letter from the Street Cleaning Commissioner to the Director of the Bureau of Personal Service:

"Yesterday a delegation of sweepers waited upon me and stated that the cost of food and necessities of life had so increased of late that they were unable to live decently on present salaries. I was much impressed by the statements made by the men, and believe that a survey of their living conditions should be made before the next revision of salary schedules is made at the end of this month. I would be glad to have your views as to the possibility of making such a survey within the next ten days."

A survey such as that requested by the Street Cleaning Commissioner had already been made in connection with the publication of a new edition of the Standard Specifications for Personal Service for the purpose of revising the original study of the cost of living in accordance with the abnormal rise in the price of necessities. The conclusions drawn from this survey are embodied in the following report. They indicate that the cost of living for the laborer's family of five persons, selected in the original report, has risen from \$840 to approximately \$980; that is, about  $16\frac{2}{3}$  per cent. It is not, of course, to be assumed that the present conditions are likely to continue indefinitely. The various government



agencies and committees appointed to report on or cope with the high cost of living will probably bring about considerable reduction in prices and will relieve the scarcity of certain products. It is, however, reasonable to assume that \$840 cannot be recommended as a maximum rate for unskilled laborers in the revised edition of the Standard Specifications if it is intended that the City of New York shall meet conditions in representative private employment or shall itself be a model employer. The maximum rate recommended for sweepers has, therefore, been raised from \$840 to \$888, and similar increases in the maximum rates have been recommended in a number of other groups of employees. In addition, in order to preserve proper distinction between unskilled and slightly skilled employees, it has been found necessary to recommend higher rates for a number of slightly skilled employees. These proposed changes are thought to be very conservative. They do not meet the present abnormal conditions as far as the minimum rates are concerned.

In applying the new rates, it may therefore be desirable to waive temporarily one or more of the lowest rates; for example, to fix temporarily the minimum for laborers, sweepers, deckhands and other employees at \$816 or \$840 and to make similar temporary adjustments in the case of other unskilled and slightly skilled employees. In other words, while the standard minimum rates should remain as published in the new edition of the Standard Specifications, a higher minimum might be adopted temporarily to meet present conditions. The standard minimum rates could be restored as soon as living conditions become more nearly normal.

The following is a partial list of the changes in the salaries of low grade employees proposed in the new edition of the Standard Specifications:

Title.	Present Range (Amount of Increase in Brackets).	Proposed Range (Amount of Increase in Brackets).
Boardman.....	\$720-\$840 (\$24)	\$792-\$888 (\$24)
Bridgetender.....	816- 960 ( 36)	876- 984 ( 36)
Caretaker—Men.....	780- 960 ( 36)	840- 984 ( 36)
	2.50	2.70
Cleaner—Men.....	672- 840 ( 24)	768- 864 ( 24)
Cleaner (Windows).....	720- 864 ( 24)	792- 888 ( 24)
Deckhand.....	720- 840 ( 24)	792- 888 ( 24)
		313 da. 900-1020 ( 24)
		365 da.
Driver.....	768- 888 ( 24)	840- 936 ( 24)
	2.50-2.80 ( .10)	2.70-3.00 ( .10)
Elevator Operator.....	780- 960 ( 36)	840- 984 ( 36)
Gardener.....		2.80-3.00 ( .10)
Hostler.....	744- 864 ( 24)	816- 912 ( 24)
	2.40-2.70 ( .10)	2.60-2.90 ( .10)
Laborer—Unskilled.....	720- 840 ( 24)	792- 888 ( 24)
	2.50	2.50-2.80 ( .10)
Laborer—Skilled.....	864- 936 ( 24)	888- 936 ( 24)
	2.75-3.00	2.80-3.00 ( .10)
Laborer (Stores).....	744- 864 ( 24)	816- 912 ( 24)
Laborer—Watchman.....	600	660
		720 on repair work
Loader.....	816- 888 ( 24)	864- 960 ( 24)
Motor Truck Driver.....	888- 960 ( 36)	960- 996 ( 36)
Climber and Pruner.....	720- 840 ( 24)	
	2.30-2.70 ( .10)	2.80-3.00 ( .10)
Park Laborer—Unskilled.....	720- 840 ( 24)	
	2.30-2.70 ( .10)	2.50-2.80 ( .10)
Park Laborer—Skilled.....	720- 840 ( 24)	
	2.30-2.70 ( .10)	2.80-3.00 ( .10)
Stableman.....	720- 840 ( 24)	792- 888 ( 24)
	2.30-2.70 ( .10)	2.50-2.80 ( .10)
Sweeper.....	720- 840 ( 24)	792- 888 ( 24)
Ticket Chopper.....	744- 864 ( 24)	816- 912 ( 24)
Watchman.....	720- 840 ( 24)	792- 888 ( 24)

## CLASSIFICATION OF OBJECTS OF EXPENDITURE.

The following table shows a comparison of the results of studies made in February, 1915, and February, 1917, of the cost of living for an unskilled laborer's family in New York City. The increase in cost in those two years seems to be approximately 16 per cent.

Objects of expenditure have been classified in eight standard groups, for each of which the total annual expense in the years 1915 and 1917 is as follows:

	1915	1917
I.—Housing.....	\$168.00	\$168.00
II.—Car fare.....	30.30	30.30
III.—Food.....	383.812	492.388
IV.—Clothing.....	104.20	127.10
V.—Fuel and Light.....	42.75	46.75
VI.—Health.....	20.00	20.00
VII.—Insurance.....	22.88	22.88
VIII.—Sundries.....	73.00	73.00
Total per year.....	\$844.942	\$980.418
Sundries classified—		
Papers and other reading matter.....		\$ 5.00
Recreation.....		40.00
Furniture, utensils, fixtures, moving expenses, etc.....		18.00
Church dues.....		5.00
Incidentals—Soap, washing material, stamps, etc.....		5.00
Total.....		\$ 73.00

## I.—Housing:

A family consisting of five people needs at least four rooms to meet the demands of decency. Three rooms for more than four persons causes over-crowding. Four rooms, on the other hand, for five persons is slightly above the accepted standard of "one and one-half persons to a room."

Rent in tenement districts at the present time, as in 1915, according to the statement of reliable real estate men, averages \$4.00 per room per month. This statement is verified by the family budgets exhibited in Appendix B and by the data on present rentals in Appendix A.

The housing minimum arrived at in our standard classification represents therefore the rent expenditure necessary for an average of  $3\frac{1}{2}$  rooms at the \$4.00 monthly rate, or for four rooms at a \$3.50 monthly rate. The resulting annual expenditure for housing, \$168, is 20 per cent of the total 1915 expenditure, which is generally considered a proper ratio of housing to total income.

It is stated by representatives of Horace S. Ely & Co., real estate agents, that the decrease in immigration and increase in emigration, due to the war, have caused many vacancies in tenement houses in the upper and lower east side, with the result that both minimum and maximum rental values in certain quarters have been reduced about \$1. The present generally prevailing tendency to higher prices largely counteracts this reduction, however, so that it may be said that in general rents are the same in 1917 as in 1915.

## II.—Car Fare:

The minimum estimate for care fare remains unchanged at \$30.30, which represents only 10c per day for 303 working days.

### III.—Food:

In arriving at a proper minimum for food expenditure, a number of factors must be taken into consideration. A laborer, in order to perform efficient work, requires nourishing and wholesome food in considerable quantities. The age of children is an all important factor in determining their food consumption. The prices of foodstuffs are constantly changing.

The schedule adopted by the United States Department of Agriculture (Farmers' Bulletin No. 142) apportions the food requirements of women and children of various ages on the basis of fractions of the integer required to support a mature working man. This schedule is as follows:

Man.....	1.
Woman.....	.8
Boy—16 years.....	.9
12 to 16 years.....	.8
10 to 12 years.....	.6
Girl—15 to 16 years.....	.8
14 to 15 years.....	.7
10 to 14 years.....	.6
Child—6 to 9 years.....	.5
2 to 5 years.....	.4
Under 2 years.....	.3

According to the above table the family which we have assumed, consisting of a man, wife, a boy of 13 years, a girl of 10 years, and a boy of 6 years, would consume a quantity of food sufficient for 3.7 men.

In 1907, Federal government dietitians agreed that families spending at the rate of 22c per man per day were not receiving food enough to maintain physical efficiency.\* Moreover, this minimum was predicated upon extraordinary intelligence, in that it assumed that the mother possessed a scientific knowledge of household economy, food values and market conditions. The food prices in 1913, as compared with 1907, had risen 16 per cent, according to a report of the United States Department of Labor. (Retail Prices and Cost of Living, Series 8.) Taking the 22c per man per day minimum established in 1907 and allowing a 16 per cent increase, 25½c would be the minimum measured by 1913 standards. Adding to this a 1½c marginal limit, to provide for discrepancies and for an increase in prices in 1914, 27c per man per day was arrived at as a fair minimum for 1915. This was the minimum established at that time by the Association for Improving the Condition of the Poor as the basis of their relief work and was used as a basis for calculation in the 1915 Report of this Bureau. At the present time the Association for Improving the Condition of the Poor is using 30c as its minimum because of the increased cost of food. Upon these two bases the cost of food per day for our family in New York City would be:

	1915 Per day.	1917 Per day.
Husband.....	\$ .27	\$ .30
Wife.....	.216	.24
Boy, 13 years.....	.216	.24
Girl, 10 years.....	.162	.18
Child, 6 years.....	.135	.15
Total per day.....	\$ .999	\$1.11
Total per week.....	\$7.00	\$7.77

\* Report on Nutrition Investigation. Special Committee on Standards of Living.



This conclusion is based upon scientific facts regarding the number of calories of heat and grams of protein necessary for the human body. It is only one and by no means the most trustworthy of several logical methods of reaching a minimum estimate.

Another and more trustworthy method of approach to such a conclusion is to price a list of foodstuffs necessary for an American family of five. Following this method, an itemized food budget was taken from Dr. Chapin's book on "Standard of Living in New York City," and was submitted for criticism to dietitians and social service workers, with the result that the list was slightly modified. In order to find the prevailing cost of the modified list in New York City, foodstuffs were priced in the places where unskilled laborers would naturally buy; that is, municipal markets, push-carts, co-operative stores and regular neighborhood grocery and butcher establishments. (For this food budget used in field work, with prices for 1915 and 1917, see Appendix A.) This method of approach led to the conclusion that \$7.381 per week or \$383.812 per year would be the minimum requirement for 1915.

In securing facts as to the increased cost of food for 1917, this same list of foodstuffs was again priced at markets, push-carts and stores of the same type as before and the average amount of increase ascertained. From this investigation it was learned that the cost of exactly the same foods is at the present time \$9.469 per week or \$492.388 per year, showing an increase of \$2.088 per week or \$108.576 per year over the cost for 1915. It may be noted that it is possible to sustain life on a less varied and less expensive diet than that considered in this report, but, as stated before, this study is based upon standards of living consistent with American ideas.

#### IV.—Clothing:

The clothing estimate was made in the same way as that for food. A list of the clothing needed by a family of five was taken from Dr. Chapin's report and considerably modified. The prices of the various articles in this clothing budget were obtained from the type of stores at which workmen would naturally buy. (For copy of this list of clothing, with prices for 1915 and 1917, see Appendix A.)

It is difficult to make exact statements about the expenditure for such an item as clothing, in which there are so many personal considerations. Basing our estimate, however, upon average common-sense requirements and upon prices prevailing in 1915 for these requirements, we concluded that \$104.20 for our assumed family of five was the exact clothing cost for that year. Prices for this clothing list were again obtained in February, 1917, in the same way in which food prices were checked, and were found to total \$127.10 as against \$104.20 in 1915.

#### V.—Fuel and Light:

The fuel and light estimate of \$42 for 1915 was based on facts submitted by the Consolidated Gas Company and by public and private relief organizations, and on past studies, taking into consideration, however, the prevailing prices of coal, wood and gas. (For supplementary data see Appendix A.) All of the estimates submitted were in the neighborhood of \$40 to \$45.

Our conclusion for 1915 was a fair mean and allowed for the following approximate consumption of fuel and gas:



## Fuel

During the winter months, 3 bags of coal per week at 25c a bag, and 6 bundles of wood per week at 2c per bundle, resulting in a weekly expenditure of 87c. During the fall months, 2 bags of coal per week at 25c per bag, and 4 bundles of wood per week at 2c a bundle, resulting in a weekly expenditure of 58c. Assuming 18 weeks for the winter and 13 weeks for the fall, the total expenditure for fuel amounted to \$23.20 for 1915.

## Light and Gas used for Fuel

Light, assuming the use of gas during the 18 weeks of the winter, at 25c per week, 13 weeks of the fall at 35c per week, and 21 weeks of the summer at 50c per week, amounts to a total expenditure of \$19.55. During the fall and summer gas is used for cooking. Thus the consumption is increased.

The estimate for 1917 is changed only by an increase in the cost of coal from 25c to 30c a bag. This rise causes an increase in the total yearly expenditure for fuel to \$27.20 as against \$23.20 in 1915.

## VI.—Health:

The problem of arriving at a minimum for health expenditure is necessarily involved. Several studies have been made upon this subject which for our purposes are quite satisfactory. The Metropolitan Life Insurance Company, in connection with its welfare work, has considered health expenditure in more detail than has any other organization. Dr. Lewis I. Dublin, their statistician, who has studied this problem from an insurance standpoint, concludes that a workingman will average five weeks' illness once in every three years, or that one out of every three workingmen will be sick in each year. A prominent benevolent society, organized in St. Louis for the special purpose of establishing health insurance, has arrived at the conclusion that an adult requires 50 cents and a child 25 cents a month for health expenditure. This totals \$21 a year for our family of five persons. Prof. Irving Fisher, of Yale, who has devoted considerable study to health insurance, states that the average expenditure resulting from illness and death in workingmen's budgets is \$27 per annum. This amount is agreed to by the United States Commissioner of Labor (1912) and by Dr. Dublin, although Dr. Dublin supplements this by stating that even at this rate the family will to some extent be dependent upon charity.

Our conclusion of \$20 is based upon the fact that there are more facilities for conserving the health of a family in New York City than elsewhere and that \$27 under these conditions would be too high. We realize, however, that it is impossible to establish beyond criticism a definite amount for health expenditure. This amount, first established in 1915, remains unchanged for 1917.

**VII.—Insurance:**

Insurance is found to be an almost universal item in budgets of workingmen's families. The expenditure of \$22.88 in our minimum estimate is based upon the assumption that the head of the family should be insured for \$500, the wife for \$100, and that the children should each have the smallest amount of insurance which can be obtained. This is merely industrial insurance and does not provide for sickness, accident, or property loss. \* \* \* \* \*

In industrial insurance weekly payments are the rule. For a \$500 policy the premium is 25c a week, for a \$100 policy 10c a week, while a minimum of 3c is required for the policies of children—a total weekly payment of 44c, or a yearly expenditure of \$22.88 for the family. Our estimate is based on the rates offered for those policies considered most satisfactory by the three insurance companies which specialize in industrial insurance. This amount remains the same in 1917 as in 1915.

**VIII.—Sundries:**

The item "Sundries" includes recreation, reading, general household expense, church contributions, etc. It is unnecessary to defend the fact that a family in order to maintain a normally happy and self-respecting existence must have proper amusements. For recreation, therefore, we have allowed occasional trips to the beach, incidental car fare, moving picture shows, Christmas and birthday presents and miscellaneous amusements. For furniture, utensils, fixtures, moving expenses and general maintenance, \$18 is allowed, although this amount could be legitimately increased. \$5 is allowed for church contributions. Incidentals, including soap, washing material, stamps, umbrellas and other miscellaneous items, are totaled at \$5. For reading a one-cent daily paper is allowed, with a Sunday paper almost every week. The resulting \$73 expenditure for Sundries is a fair minimum. This amount, fixed originally in 1915, is allowed to remain unchanged for 1917, although some slight increase could legitimately be made.

## APPENDIX A.

## Field Reports—Supporting Data on Food, Clothing, Rent, Fuel and Light.

The prices of the above commodities were obtained during the months of January and February, 1915, and February, 1917:

## MINIMUM FOOD BUDGET FOR ONE WEEK FOR FAMILY OF FIVE, WITH CURRENT PRICES.

	1915		1917
<b>Meat and Fish—</b>			
5 lbs. beef, at 16c lb.....	\$0.80	at 20c,	\$1.00
½ lb. beef for stew, at 12c lb.....	.06	at 16c,	.08
2 lbs. pork, at 14c lb., 28c or		at 22c, or	
2 lbs. ham, at 18c lb., 36c.....av.	.32	at 22c,	.44
1 lb. chicken (4 lbs. month), at 18c lb.....	.18	at 23c,	.23
1½ lbs. fresh fish, at 12c lb.....	.18	at 15c,	.225
	\$1.54		\$1.975
<b>Eggs and Dairy Products—</b>			
1 lb. butter, at 33c lb.....	.33	at 41c,	.41
½ lb. cheese, at 20c lb.....	.10	at 27c,	.135
2 doz. eggs, at 32c doz.....	.64	at 42c,	.84
16 qts. milk, at 6c qt.....	.96	at 8c,	1.28
	\$2.03		\$2.665
<b>Cereals—</b>			
21 loaves of bread, at 5c.....	1.05	at 6c,	1.26
1 doz. rolls, at 10c doz.....	.10	at 12c,	.12
2 lbs. cake, at 10c lb.....	.20	at 20c,	.40
Rice (1 lb. per month), at 7c lb.....	.017	at 8c,	.02
Flour (3½ lbs. twice a month), at 4½c lb.....	.078	at 7c,	.122
Oatmeal (2½ lbs.), at 4c lb.....	.10	at 5c,	.125
	\$1.545		\$2.047
<b>Vegetables, Fruits, Etc.—</b>			
6 qts. potatoes, at 8c qt.....	.48	at 10c,*	.60
Turnips or carrots.....	.05		.06†
2 lbs. onions, at 3c lb.....	.06	at 8c,	.16
Fresh vegetables.....	.75		.937†
Dried beans and peas (½ lb.).....	.05	at 14c,	.07
Can of tomatoes, at 10c can.....	.10	at 12c,	.12
Can of corn (monthly), at 10c can.....	.025	at 12c,	.03
Fresh fruit.....	.25		.25
Dried prunes (1 lb. per month), at 14c lb.....	.035	at 14c,	.035
	\$1.80		\$2.262
<b>Sugar, Tea, Coffee, Etc.—</b>			
1 lb. coffee, at 20c lb.....	.20	at 20c,	.20
1¾ lbs. sugar, at 5½c lb.....	.096	at 8c,	.14
Syrup.....	.02		.02
Pickles, spices, etc.....	.05		.06
¼ lb. tea, at 40c lb.....	.10	at 40c,	.10
	\$0.466		\$0.52

\*At 5c per lb.

†Average 20 per cent increase in cost.

‡Average 25 per cent increase in cost.

Food Summary.	1915	1917
Meat and fish.....	\$1.54	\$1.975
Eggs and dairy products.....	2.03	2.665
Cereals.....	1.545	2.047
Vegetables, fruits, etc.....	1.80	2.262
Sugar, tea, coffee, etc.....	.466	.52
Total per week.....	\$7.381	\$9.469
Annual total.....	\$383.812	\$492.388





is the accurate result of an intensive survey carried on by the workers of this bureau. In almost every case a family of five persons is assumed. The Bureau of Personal Service is of course not responsible for the prices and estimates contained in these budgets. They are quoted just as they were submitted to this Bureau.

### MANHATTAN.

#### Association for Improving the Condition of the Poor.

TABLE I.—COMPARISON OF A. I. C. P. FAMILY BUDGETS IN 1915 AND 1917.

Items	1915 (Per month)		1917 (Per month)
Rent.....	\$12.00		\$13.00
Clothing.....	10.00		10.00
Fuel and Light.....	3.25		3.25
Sundries.....	2.00		4.00
Food (family of 5)—			
Man.....1 unit \$8.19		\$9.10	
Woman.....0.8 unit 6.55		7.28	
Girl (10 years).....0.6 unit 4.91	27.03	5.46	30.03
Child ( 6 years).....0.5 unit 4.10		4.55	
Child ( 2 years).....0.4 unit 3.28		3.64	
Total per month.....	\$ 54.28		\$ 60.28
Total per year.....	651.36		723.36

The fact cannot be over emphasized that the above budget indicates the allowance made by the Association for Improving the Condition of the Poor for relief purposes. It is, therefore, not in any sense an *ideal* family budget, and it is included here only for purpose of comparison. The following are extracts from a statement made by Bailey B. Burritt, General Director, in explanation of the various items of the above budget, and also of the food budget in Table II.

#### Rent:

The item of rent represents an approximate average of our own rents. The \$13.00 item for 1917 does not represent an increase in actual rent, as we have found but little evidence of any increase, but does indicate that the average standard of a home considered acceptable by the Association for Improving the Condition of the Poor is higher in 1917 than it was in 1915.

#### Clothing:

Clothing is the least standardized item of the normal family budget. \$2.00 a month for each individual was inadequate to cover the clothing budget for 1915, and is still inadequate now, but we have made no extended study of the considerable increase of which we are conscious in 1917. Our only justification for the clothing item in our budget is that much clothing is given to our families and we depend upon this to make up the deficiency.

### Fuel and Light:

Experience has led us to adopt the standard of \$3.25 for fuel and light as being the average expenditure for these items. It is inadequate in 1917. Our families have actually spent more for fuel and have done so by drawing on the modest clothing item allowed in our budget. Eight families checked up yesterday spent \$29.66 for fuel and light in the months of January, February and March, 1917, as compared with \$26.75 for the same period in 1915, an increase of 16.5 per cent.

### Sundries:

For sundries we have adopted a more or less arbitrary standard of \$1 each for the first three individuals in the family and 50c a month for each additional member of the family, with a maximum of \$5. This allowance is supposed to include insurance, such household supplies as soap and cleaning material and other incidental expenditures. It is not adequate for the replenishing of household supplies. Insurance was not included under sundries in the \$2 allowance for 1915, but is included in the \$4 allowance for 1917. The increase from \$2 to \$4 represents progress toward recognition of the inadequacy of this item and is still inadequate. We have not included car fare.

### Food:

Last autumn we arbitrarily changed our food allowance per diem per individual from 27c to 30c. This, however, is less than the actual increase in cost of food during the past two years. A more detailed study of food prices is included below. (See Table II.)

Table II indicates the results of a study made last November of the actual increase in the cost of food weighted as the average workingman's family budget should be weighted. We have also added the prices of the same allowance for March, 1917. The comparison therefore is between November, 1915, November, 1916, and March, 1917. The statement indicates that during one year there was an increase in food prices of 26.9 per cent and that between November, 1915, and March, 1917, there was an increase of 41.1 per cent. We have kept for the purpose of this comparison the same amount of potatoes and onions as in 1915. As a matter of fact our families have adjusted their purchases in this particular so that the net increase is undoubtedly not as great as 41.1 per cent. As a check on this study we secure wholesale prices of a similar family order from Bradstreet's for 1915 and 1916. The total wholesale cost of these foods in 1915, according to their figures, was \$4.86 and in 1916, \$6.20 an increase of 27.7 per cent. The increase which we found in retail prices of these orders was 26.9 per cent. Bradstreet's order was actually for a family of two adults and five children, but for the purpose of argument it does not change the situation. These figures check so closely as to indicate that our data was not far out of the way.

TABLE II.—COMPARISON OF ACTUAL RETAIL PRICES OF A SUGGESTIVE WEEKLY FOOD ORDER FOR A FAMILY OF TWO ADULTS AND THREE CHILDREN UNDER 14 YEARS OF AGE.

Food	Quantity	Nov. 1915	Nov. 1916	Mar. 1917
Codfish.....	1 lb.	\$0.10	\$0.15	\$0.15
Eggs.....	1 doz.	0.31	0.49	0.39
Butter.....	1½ lbs.	0.50	0.65	0.68
Cheese.....	½ lb.	0.10	0.12	0.15
Bread.....	12 lbs.	0.80	0.96	0.96
Oatmeal.....	3 lbs.	0.12	0.15	0.15
Macaroni.....	1 lb.	0.06	0.08	0.08
Rice.....	1 lb.	0.05	0.06	0.05
Sugar.....	3½ lbs.	0.23	0.28	0.30
Beans.....	2 lbs.	0.18	0.30	0.30
Carrots.....	4 lbs.	0.10	0.16	0.20
Onions.....	4 lbs.	0.16	0.20	0.48
Potatoes.....	15 lbs.	0.35	0.75	1.05
Tomatoes.....	1 lb.	0.10	0.10	0.10
Apples.....	4 lbs.	0.10	0.20	0.20
Prunes.....	2 lbs.	0.14	0.18	0.24
Cocoa.....	½ lb.	0.13	0.13	0.13
Tea.....	¼ lb.	0.07	0.07	0.07
Coffee.....	½ lb.	0.10	0.10	0.10
Chuck steak.....	2 lbs.	0.44	0.44	0.48
Flank steak.....	2 lbs.	0.44	0.44	0.44
Milk.....	14 qts.	1.26	1.40	1.54
Total per week.....		\$5.84	\$7.41	\$8.24
Total per year.....		303.68	385.32	428.48
Percentage increase over 1915 prices.....		.....	26.9%	41.1%

## BROOKLYN.

## 1.

Estimates by Margaret F. Byington and Margerat Perkins, Superintendents, Department of Service and Relief, Brooklyn Bureau of Charities, of *minimum* American family budgets for husband, wife and three children under fourteen years, living in Brooklyn:

	1915	1917
Rent (4 rooms).....	\$3.00	\$3.00
Food.....	7.00	9.00
Car fare.....	.60	.60
Fuel and light (maximum).....	1.00	1.00
Clothing.....	2.00	3.00
Furniture and sundries (minimum).....	1.00	1.00
Insurance.....	.50	.50
Total per week.....	\$ 15.10	\$ 18.10
Yearly total.....	\$785.20	\$941.20
*Health, 59c per week.....		26.00
*Recreation, 50c per week.....		26.00
		\$993.20

\*Not included in 1915 estimate.

## 2.

Estimate by Katherine A. Ward and Patrick Mallon, Society of St. Vincent de Paul, Brooklyn, of a *fair standard* American family budget for husband, wife, and three children under 14 years, living in Brooklyn:

	1915	1917
Rent.....	\$ 3.00	\$ 3.00
Food.....	*10.50	12.00
Fuel (average).....	.60	1.25
Gas (including occasional use of cooking stove).....	.25	.25
Clothing.....	.75	1.25
Insurance.....	.40	.40
Total, per week.....	\$ 15.50	\$ 18.15
Yearly total.....	\$806.00	\$943.80
Not included: Health, Car fare, and Sundries.		

\*Stated that the \$1.50 per day food allowance would purchase only the bare necessities and good household managership would be required to keep out of debt. The clothing estimate is very low.

## SOCIAL SERVICE BUREAU OF BELLEVUE HOSPITAL.

The following is an itemized family budget as drawn up by Mary Wadley, supervisor of the Social Service Bureau of Bellevue Hospital, and five district workers, who have obtained all the information at first hand. These figures are the conservative estimates of women who are daily meeting problems arising from poverty, and who have an exact knowledge of the needs of the typical worker's family. These are not ideal estimates. They represent the practical requirements for maintaining a *decent* standard of living.

The basis of this budget is a family of five—husband, wife, and three children under 14 years.

HOUSING	1915 Per year.	1917 Per year.
Rent (3 rooms), \$14 per month.....	\$168.00	\$168.00
CAR FARE		
Car fare (303 days).....	30.30	\$30.30
FUEL AND LIGHT		
Fuel—3 bushels coal, at 25c per bushel.....	0.75	at 40c, 1.20
6 bundles wood, at 2c per bundle.....	.12	at 2½c, .15
Total per week.....	\$0.87	\$1.35
Total per year (26 weeks).....	22.62	35.10
Fuel (total coal and wood).....	\$22.62	\$35.10
Gas—\$1.25 per month x 6½ months.....	8.125	8.125
2.25 per month x 5½ months (summer)*.....	12.375	12.375
Total per year.....	\$43.12	\$55.60

\*No coal is used during the summer months. The gas bill is, therefore, increased \$1 per month



**FOOD**  
Minimum Budget for One Week.

	1915	1917
<b>Meat and Fish</b>		
5 lbs. beef, at 13c a lb.....	\$0.65	at 18c, \$0.90
½ lb. beef, at 10c a lb.....	.05	at 15c, .08
2 lbs. pork, at 32c a lb., 64c or		at 20c, or
2 lbs. ham, at 14c a lb., 28c.....av.	.46	at 20c, .40
1 lb. chicken (4 lbs. a month).....	.16	.24
1½ lbs. fresh fish, at 8c a lb.....	.12	at 14c, .21
	<u>\$1.44</u>	<u>\$1.83</u>
<b>Eggs and Dairy Products—</b>		
1 lb. butter.....	\$0.29	\$0.42
½ lb. cheese, at 18c.....	.09	at 30c, .15
24 eggs (storage, 31c a doz.).....	.62	at 55c, 1.10
16 qts. milk,* at 6c a qt.....	.96	at 9c, 1.44
	<u>\$1.96</u>	<u>\$3.11</u>
<b>Cereals—</b>		
21 loaves of bread, at 5c.....	\$1.05	at 6c, \$1.26
1 doz. rolls.....	.10	.12
2 lbs. cake, at 10c a lb.....	.20	at 15c, .30
Rice (1 lb. per mo).....	.02	2½ lbs., per mo, .05†
Flour (3½ lbs. twice a month).....	.07	at 8c, .10
Oatmeal (2½ lbs.), at 4c a lb.....	.10	at 5c, .13
	<u>\$1.54</u>	<u>\$1.96</u>
<b>Vegetables, Fruits, Etc.—</b>		
6 qts. Potatoes (10c for 3½ lbs.).....	\$0.18	1 qt., at 20c qt., \$0.20†
Turnips or carrots.....	.05	.10
2 lbs. onions, at 2c a lb.....	.04	at 10c, .20
Fresh vegetables.....	.50	.75
Dried beans and peas.....	.05	.12
Can of tomatoes.....	.07	.10
Can of corn (per month 8c).....	.02	at 12c, .03
Fresh fruit.....	.25	.35
Dried prunes (1 lb. per month 8c).....	.02	at 14c, .035
	<u>\$1.18</u>	<u>\$1.885</u>
<b>Sugar, Tea, Coffee, Etc.—</b>		
1½ lbs. coffee., at 20c a lb.....	\$0.30	\$0.30
1¾ lbs. sugar (18c for 3½ lbs.).....	.09	at 26c, .13
Syrup (four 10c cans per year).....	.008	.008
Pickles, Spices, etc.....	.05	.05
	<u>\$0.448</u>	<u>\$0.488</u>
<b>Food Summary</b>		
Meat and fish.....	\$1.44	\$1.83
Eggs and dairy products.....	1.96	3.11
Cereals.....	1.54	1.96
Vegetables, fruits, etc.....	1.18	1.885
Sugar, tea, coffee, etc.....	.448	.488
Total per week.....	<u>\$ 6.568</u>	<u>\$ 9.273</u>
Total per year.....	<u>341.536</u>	<u>482.196</u>

\*Loose milk.

†It will be noted that rice is largely substituted for potatoes because of the high price of potatoes.

## CLOTHING

## Budget for One Year

Man	1915	1917	Boys (6 and 4 Years)	1915	1917
2 hats or caps.....	\$2.00	\$2.00	2 caps.....	\$1.00	\$1.00
1 suit.....	10.00	14.00	1 suit (2 trousers), winter..	3.00	4.00
1 overcoat (\$10, last 2 yrs.)	5.00	7.00	1 overcoat (\$3, last 2 yrs.)	1.50	2.25
1 pair of pants.....	2.00	2.50	6 prs. stockings.....	.50	.90
3 working shirts.....	1.50	1.50	3 waists.....	.75	.75
2 white shirts.....	1.00	1.50	Underwear		
6 collars.....	.60	.90	Summer, 3 suits.....	.60	.60
2 pairs of overalls.....	1.50	1.96	Winter, 3 suits.....	1.00	1.50
4 ties.....	.50	.60	Shoes, 2 pairs.....	3.00	4.00
4 handkerchiefs.....	.20	.20	Repair of shoes (twice)....	1.00	1.00
6 pairs hose.....	.60	.90	3 Ferris waists.....	.75	.75
Gloves and mittens.....	.50	.50	6 handkerchiefs.....	.25	.30
Shoes, 2 pairs.....	4.00	5.00	Mittens, 2 pairs.....	.50	.50
Repair of shoes (twice)....	1.50	1.50	Rubbers.....	.50	.65
Underwear			Ties.....	.25	.35
Summer, two suits.....	1.00	1.00	Summer suit.....	1.00	2.00
Winter, two suits.....	1.50	1.50	Sundries.....	.50	.50
	\$33.40	\$42.56	Each.....	\$16.10	\$21.05
Woman			Girl		
2 hats (\$6, last 2 yrs.)....	\$3.00	\$3.00	2 hats, winter best, \$1.50		
1 coat (\$8, last 2 yrs.)....	4.00	5.00	Summer best, \$1.00 (last		
1 suit.....	8.00	10.00	2 yrs.), \$2.50.....	\$1.25	\$1.25
3 waists (2 at 50c and 1			1 stocking cap (school)....	.25	.50
at \$1).....	2.00	3.00	2 winter dresses.....	4.00	5.00
2 wash dresses.....	2.50	2.50	2 wash dresses (summer)..	2.00	2.00
2 petticoats.....	1.00	1.00	1 coat (\$4, last 2 yrs.)....	2.00	2.50
3 aprons.....	.45	.45	1 sweater.....	1.00	1.50
6 handkerchiefs.....	.45	.45	6 handkerchiefs.....	.25	.30
6 pairs stockings.....	.60	.90	6 pairs stockings.....	.50	.90
2 pairs shoes.....	4.00	5.00	2 pairs mittens.....	.50	.50
Repair of shoes (twice)....	1.00	1.00	3 petticoats.....	.75	1.00
Underwear			Linen.....	1.50	2.00
Summer, three suits.....	.60	.60	3 Ferris waists.....	.75	.75
Winter, two suits.....	1.40	2.00	Underwear		
Gloves and mittens.....	.75	.75	Summer, 3 suits.....	.60	.60
Linen.....	6.00	6.00	Winter, 2 suits.....	1.00	2.00
Rubbers.....	.50	.75	Shoes, 2 pairs.....	4.00	5.00
Sundries.....	3.00	4.00	Repair of shoes (twice)....	1.00	1.00
	\$39.25	\$46.40	Rubbers.....	.50	.65
			Sundries.....	1.50	2.00
				\$23.35	\$29.45

Clothing Summary.	1915	1917
Man.....	\$33.40	\$42.56
Woman.....	39.25	46.40
Boys (2).....	32.20	42.10
Girl.....	23.35	29.45
Total per year.....	\$128.20	\$160.51

Transunee.	1915	1917
Average weekly premium, male adult.....	10c	No
Average weekly premium, female adult.....	10c	change.
Average weekly premium, child (5c x 3).....	15c	
	35c per week—\$18.20 per year.	

## HEALTH.

Medicines.....1915 .50c per month—\$6.00 per year. 1917 No change.  
 NOTE.—No doctor's fees are included in this budget, because the Social Service Bureau has based its figures on families receiving free medical treatment at Bellevue Hospital.

SUNDRIES.	1915	1917
Papers and other reading matter.....	\$ 5.00	\$ 5.00
Recreation.....	35.00	35.00
Church dues.....	10.00	10.00
Furniture, utensils, fixtures, etc.....	15.00	20.00
Spending money for father.....	5.00	5.00
Miscellaneous—soap, washing material, stamps, moving expenses, etc.....	5.00	8.00
Total per year.....	\$75.00	\$83.00

Final Summary	1915 Per year.	1917 Per year.
Housing.....	\$168.00	\$168.00
Car fare.....	30.30	30.30
Fuel and light.....	43.12	55.60
Clothing.....	128.20	160.51
Insurance.....	18.20	18.20
*Health (Medicine).....	6.00	6.00
Sundries.....	75.00	83.00
Food.....	341.536	482.196
Total per year.....	\$810.356	\$1,003.806
Allowance for doctor's fees or sick benefit organization dues.....	14.00	14.00
Grand total.....	\$824.356	\$1,017.806

\*This does not include fees for doctor's services.

**TENTATIVE FAMILY BUDGETS SUBMITTED BY SOCIAL WORKERS  
 OF THE UNITED HEBREW CHARITIES, FOR AN UNSKILLED  
 LABORER'S FAMILY OF FIVE PERSONS.**

In submitting the revised figures for 1917, the United Hebrew Charities makes the following statement: "A recent study indicates that there is a 25 per cent increase in food prices, and though a thorough inquiry has not been made into the cost of other commodities, it is safe to say that there is a 10 per cent increase in rent, fuel, clothing and household supplies."

(1)	1915	1917
1. Housing (4 rooms at \$14).....	\$168.00	\$184.80
2. Carfare (50 weeks at 60 cents—1 person).....	30.00	30.00
3. Food (\$8 per week).....	416.00	520.00
4. Fuel and light (3 tons coal—gas, \$2 per month).....	47.00	49.30
5. Clothing.....	100.00	110.00
6. Health.....	20.00	20.00
7. Insurance.....	25.00	25.00
8. Sundries.....	100.00	110.00
Yearly total.....	\$906.00	\$1,049.10
Sundries classified—		
Papers and other reading matter.....	\$ 5.00	
Recreation.....	40.00	
Furniture, utensils, fixtures, etc.....	25.00	
Lodge dues.....	5.00	
Spending money for the father.....	15.00	
Miscellaneous—soap, washing material, stamps, moving expenses, etc.....	10.00	
Yearly total.....	\$100.00	

Submitted by R. P.

(2)	1915	1917
1. Housing.....	\$156.00	\$171.60
2. Car fare.....	30.00	30.00
3. Food.....	364.00	455.00
4. Fuel and light.....	40.00	42.00
5. Clothing.....	100.00	110.00
6. Health (dispensary).....	.....	.....
7. Insurance (lodge).....	16.00	16.00
8. Sundries.....	77.00	84.70
Yearly total.....	\$783.00	\$909.30
Sundries classified—		
Papers and other reading matter.....	\$ 5.00	
Recreation.....	40.00	
Furniture, utensils, fixtures, etc.....	15.00	
Church dues.....	5.00	
Spending money for the father.....	7.00	
Miscellaneous—soap, washing material, stamps, moving expenses, etc.....	5.00	
Yearly total.....	\$77.00	

Submitted by M. Halpern, Supervisor, District No. 4, February 11, 1915.

(3)

I am making only a rough estimate, as such a budget would take considerable time and should be based upon a careful investigation of a number of families of a given group.

Assuming that the ages of the children are 11, 9 and 7, and that they are girls, I have made the following estimate:

	1915	1917
1. Housing.....	\$144.00	\$158.40
2. Car fare.....	30.00	30.00
3. Food.....	*377.00	471.25
4. Fuel and light.....	31.00	32.50
5. Shoes and clothing (this includes 2 pairs of shoes each for the children at \$1.50, and 2 pairs each for the man and woman at \$4, excluding cost of repairs).....	100.00	110.00
6. Health.....	20.00	20.00
7. Insurance.....	25.00	25.00
8. Sundries.....	51.00	56.10
Yearly total.....	\$778.00	\$903.25
Sundries classified—		
Papers and other reading matter.....	\$ 5.00	
Recreation.....	26.00	
Furniture, utensils, fixtures, shoe repairing.....	15.00	
Miscellaneous.....	5.00	
Yearly total.....	\$51.00	

\*Allowing \$2 per week for man, \$1.50 for woman, \$1.25 for each of the three children. This is a more liberal estimate than that given by Chapin's Budget, which was made a few years ago. I increased the amount to meet the present needs of higher cost of living.

Submitted by Anna Fox.

#### 14.—DIGEST OF LITERATURE ON COST OF LIVING OF WORKINGMEN IN NEW YORK CITY.

The Bureau of Standards of New York City in its report of 1915 to the Committee on Salaries and Grades of the Board of Estimate, on the Cost of Living for an Unskilled Laborer's Family, submitted a digest of the authoritative literature bearing on the subject. This is reprinted here because of its value in giving, in brief summary form, the results of independent and impartial studies as to the minimum family standards of workingmen, and the basis for an estimate as to how they have been affected by rising prices.



## INDEX TO DIGEST.

The Standard of Living Among Workingmen's Families in New York City.

Robert Coit Chapin.

Russell Sage Foundation, 1909.

The Influence of Income on Standards of Life.

Robert Coit Chapin.

American Economic Association Publication, Vol. 10, 1909.

Cost of Living for Wage-Earner's Family in New York City.

Louise Bolard More.

Annals of the American Academy of Political and Social Science, July, 1913.

Wage-Earner's Budgets.

Louise Bolard More.

Financing the Wage-Earner's Family.

Scott Nearing.

New York, B. W. Huebsch, 1913.

A Living Wage.

John Augustine Ryan.

New York, The MacMillan Co., 1906.

Utilization of the Family Income.

Martha Bensley Bruere.

Annals of the American Academy of Political and Social Science, July, 1913.

Some Unconsidered Elements in Household Expenditures.

Margaret Frances Byington.

Annals of the American Academy of Political and Social Science, July, 1913.

Cost of Living of the Normal Family.

Frank Hatch Streightoff.

## DIGEST.

Several reliable and accurate studies have been made of the cost of living for laborers in New York City. The book generally regarded as standard is Robert Coit Chapin's "The Standard of Living Among Workingmen's Families in New York City."

**"THE STANDARD OF LIVING AMONG WORKINGMEN'S FAMILIES IN  
NEW YORK CITY."**

This volume is a compendium of the data obtained by the Special Committee on Standard of Living, appointed by the seventh New York State Conference of Charities and Correction, and contains a detailed study of the expenditures and living conditions of 391 families in Greater New York, averaging five persons each whose incomes range approximately from \$600 to \$1,100. Twenty-five families below the \$600 mark and forty-eight above the \$1,100 mark are included for the sake of indicating tendencies, but the main attention is concentrated upon the 318 families within the \$600 to \$1,100 range. The families under discussion are distributed as follows:

## (a) By Borough—

Manhattan.....	291
Bronx.....	17
Brooklyn.....	64
Queens.....	9
Total.....	391

## (b) By nationality of the father—

American.....	88
Teutonic.....	46
Irish.....	26
Colored.....	29
Bohemian.....	14
Russian.....	78
Austro-Hungarian.....	39
Italian.....	69
Others.....	2
Total.....	391

## (c) By occupation—

Domestic and personal service.....	96
Trade.....	47
Transportation.....	53
Manufacturing and mechanical trades.....	189
Professional.....	6
Total.....	391

The occupations represented are principally those of the less skilled employments, in which the wage is from \$2 to \$3 a day. In the group are found laborers, teamsters, garment workers, bar-tenders, cooks, waiters, janitors, tradesmen, agents, clerks, dealers, etc.

The expenditures are analyzed under the following heads: (1) Housing, (2) Car fare, (3) Fuel and Light, (4) Food, (5) Clothing, (6) Health, (7) Insurance, (8) Sundry minor items.

Tables and charts show the apportionment (averages and percentages) of expenditures by:

1. Income group, i. e., \$600 to \$699; \$700 to \$799; \$800 to \$899-\$900 to \$999; \$1,000 to \$1,099 per year.

2. Nationality.

3. Borough (in some cases).

The relation of income to expenditure is compared in detail by income groups and nationalities carefully analyzed and summarized in the following table, which in concentrated form gives a comprehensive review of the problem:

TABLE OF AVERAGE ANNUAL EXPENDITURES FOR GIVEN OBJECTS—BY INCOME GROUPS.

Description.			Average Itemized Expenditures.									
Income Group.	Number of families.	Average Number of persons.	Total Average Income.	Total Average Expenditures.	Average Itemized Expenditures.							
					Rent.	Car fare.	Fuel and light.	Food.	Clothing.	Insurance.	Health.	Sundries.
\$600-\$699	72	4.9	\$650.17	\$650.57	\$153.59	\$11.31	\$37.71	\$290.10	\$ 83.48	\$13.05	\$13.78	\$ 47.55
700- 799	79	5.1	748.83	735.98	161.36	10.53	36.94	335.82	98.79	18.24	14.02	60.28
800- 899	73	5.2	846.26	811.88	168.24	15.86	41.04	359.26	113.59	17.62	22.19	74.08
900- 999	63	5.1	942.03	906.70	171.67	13.79	46.70	405.19	132.34	23.71	23.30	90.00
1000-1099	31	5.0	1,044.48	1,009.57	183.12	18.46	46.11	451.46	155.57	25.46	14.80	114.59

A similar table was prepared by Louise Bolard More, showing expenditures:

1—By income groups.

2—By size of family.

It is taken from her book "Workingmen's Budgets" and is inserted here for comparison with the foregoing table by Dr. Chapin.

Description.			Average Itemized Expenditures.								
Income Group.	Number of families.	Average Number of persons.	Total Average Expenditure.	Rent.	Car fare.	Fuel and light.	Food.	Clothing.	Insurance.	Health.	Sundries.
\$600-\$700	29	5.1	\$656.95	\$142.55	.....	\$37.36	\$299.06	\$59.16	\$30.04	.....	\$ 88.78
700- 800	27	5.3	739.41	156.81	.....	47.52	326.63	68.27	36.34	.....	103.84
800- 900	25	5.9	831.28	154.89	.....	44.51	380.36	85.55	26.10	.....	139.87
Size of family.											
4	40	.....	\$743.79	\$162.80	.....	\$40.16	\$309.10	\$79.50	\$25.56	.....	\$126.67
5	39	.....	720.61	155.49	.....	39.95	327.24	58.74	33.12	.....	106.07
6	36	.....	875.98	166.69	.....	44.70	360.66	97.24	34.62	.....	172.07

Dr. Chapin has carefully prepared statistics showing in general the minimum expenditure required for each item. His conclusions, without respect to nationality or borough, are as follows:

### Housing:

When it is remembered that in most quarters of the City an apartment of four rooms costs more than \$14 a month, it will be seen that no proper standard for housing conditions can be maintained for a year at less than twelve times this amount, or \$168.

### Car Fare:

\$25 a year is needed by the average family for car fare.

### Fuel and Light:

The minimum required for this purpose is tabulated as follows:

Three tons of coal, at \$6.50.....	\$19.50
Wood and matches.....	3.00
Gas, at \$2 per month in summer, and \$1 per month in winter.....	18.00
Total.....	<hr/> \$40.50 per year.

### Food:

On the basis of prices prevailing in the summer of 1907, the families which spent at the rate of less than 22 cents per man per day did not have sufficient food to maintain physical efficiency. Dr. Chapin did not arrive at definite conclusions regarding the amount of food required by a family, since it necessarily varies according to the ages of the children. He did, however, consider one family consisting of father, mother and three children, aged four, three and two years, respectively, and in this case regarded \$4.24 per week, not including lunches for the man, as the absolute minimum. (This minimum pre-supposes a housewife with a knowledge of the nutritive values of foods, efficient in household management and able to exercise judgment in purchasing supplies, a decidedly extravagant supposition. Nor is it fair to base estimates on conditions existing in a family in which the children are so young. Authorities generally agree that not less than \$7.00 per week is required for food).

### Clothing:

Not less than \$100 is required to provide decent clothing for a normal family of five.



### Health:

Aside from a flat statement that an \$800 income does not permit expenditures sufficient to care properly for the health of the family, Dr. Chapin does not allow any fixed sum for health expenses. Statistics show that where the health expenditures are heavy, expenditures in other directions are curtailed. For instance, an abnormally low expenditure for the man's clothing appears in one schedule, where it is stated also that he was sick in a hospital for several weeks. In other cases where the health expenditure is large, the expenditures for amusement, recreation and miscellaneous purposes disappear.

### Insurance:

Insurance is carried by a majority of families, but generally of the industrial type, more properly described as burial insurance than life insurance. Policies usually amount to \$100 for adults and \$50 for children. Twenty-five dollars a year is a very reasonable expenditure for this purpose.

### Sundry Minor Items:

These include expenditures for furniture, recreation and amusements, education and reading matter, moving, and dues and contributions. The expenditures vary from \$47.55 to \$114.59. Dr. Chapin does not venture to state a minimum.

## GENERAL CONCLUSIONS OF DR. CHAPIN.

1. "An income under \$800 is not enough to permit the maintenance of a normal standard."
2. "An income of \$900 or over probably permits the maintenance of a normal standard, at least as far as the physical man is concerned."
3. "It seems probable that on an amount ranging from \$800 to \$900, the standards prevailing among Bohemians, Russians, Austrians and Italians may be maintained, but that it is the exception rather than the rule, when the more expensive standards of the American and kindred nationalities are maintained on this amount."
4. "A comparison of the families by nationalities shows that at almost every point a lower standard of expenditure prevails among the Bohemians, Russians, Austrians and Italians than among the Americans, Teutons and Irish. The families of the former group on incomes above \$700 to \$800 begin to save and show a surplus \* \* \* while families of the other group do not reach the saturation point, so to speak, below an income of \$900 or \$1,000."
5. "The standard of living varies as the two jaws of the vise, wages and prices contract and relax."

### "THE INFLUENCE OF INCOME ON STANDARDS OF LIFE."

In this article Dr. Chapin brings out the following: That 22 cents per diem per man is the minimum allowance for food; that one and one-half persons to a room, not over six persons to four rooms, is the minimum standard of housing; and that \$100 per year is the absolute minimum for clothing and washing.

According to these standards the following conditions in income groups appear:

- (a) \$400 to \$500: All are underfed.  
88% underclad.  
65% overcrowded.
- (b) \$500 to \$600: 65% underfed.  
88% underclad.  
71% overcrowded.
- (c) \$600 to \$700: 33% underfed.  
63% underclad.  
51% overcrowded.

For every income group thereafter, overcrowding is the main evil. Even in the \$1,100 group, where none are underfed and only 6% underclad, 21% are overcrowded.

The above facts show that, in (a) the need of shelter is being satisfied at the expense of food and clothing, in (b) the desire for sufficient food is being satisfied at the expense of shelter. A higher rental is paid but more people are crowded into the rooms.

In discussing savings, Dr. Chapin shows that the fact that money is saved is no proof that a proper standard of physical efficiency is attained. Many families save at the expense of efficiency and comforts. For example, in the three income groups mentioned above, 50% of the underfed, 65% of the underclad, and 44% of the overcrowded, report a surplus of \$25 or more. It is interesting to note that the proportion of families saving money among the Russian and Italian families is much higher than among the Americans.

### "COST OF LIVING FOR A WAGE-EARNER'S FAMILY IN NEW YORK CITY."

With the exception of Dr. Chapin's work upon this problem, Louise Bolard More has accomplished more for our purpose than any other authority. In this article Mrs. More designates \$850 a year, or \$16.50 a week, as a representative income of the typical family under discussion. This income is a little above the point where a household ceases to run into debt. It allows a small margin whereby a respectable family may retain a fair physical and moral standard under city conditions.

"Other investigations, as well as my own, have placed this as a fair average for workingmen's families in a city like New York."

Her conclusions are based on the following conservative family budget:

Object of Expenditure.	Per week	Per year
Rent.....	\$3.25	\$168
Food.....	7.00	364
Clothing.....	2.00	100
Fuel and light.....	.80	40
Insurance.....	.70	35
Sundries.....	2.75	143
Total.....	\$16.50	\$850

This budget is supported by the following data:

### Rent:

Thirteen dollars and fifty cents per month is 19.4% of total expenditure. Three or four rooms at present rates would cost \$12, \$16 or \$18 per month. Conservative estimate: \$14 per month—\$168 per year.

### Food:

Recent investigations place necessary expenditure for food at 22c per day per man. Thus, for a family of five, with the children aged 12, 8 and 3 years, \$5.70 is a minimum, but this necessitates scientific knowledge of food values, household efficiency, and economical buying.

One dollar per day is generally regarded by housekeepers as adequate to provide nutrition for a family of five or six persons. Conservative estimate: \$7 per week—\$364 per year.

### Clothing:

The expenditure for clothing varies greatly. However, \$100 per year is considered a minimum allowance.

### Fuel and Light:

Coal at \$6 to \$6.50 a ton or 25c a bushel or 10c a pail.

Gas at 25c per 250 cubic feet.

Wood—gathered by children.

Twenty-five families with incomes between \$800 and \$900 average \$44.51 per year for light and fuel. Conservative estimate: \$40 per year.

**Insurance:**

Expenditure for this item is almost universal. Only 26 out of the 200 families investigated did not carry life insurance. Policies vary from \$50 to \$300, bearing a premium of \$30 to \$40 per year. Average amount—\$37.19. In one case an expenditure of \$127 per year with an income of only \$1,200 was discovered. Conservative estimate—\$35.

**Sundries, Car Fare, Furniture, etc.:**

	Per year.
Papers and magazines.....	\$ 5.00
Furniture, kitchen utensils, etc.....	15.00
Recreation (summer excursions, dances, theatres, etc.).....	20.00
Drink (occasional pint of beer at supper—man not a hard drinker).....	20.00
Church dues.....	5.00
Spending money—father (including shaves, tobacco, car fares to and from work, union dues, and drink outside home).....	50.00
Occasional sickness.....	10.00 or less
Miscellaneous—domestic service in time of sickness, soap, washing materials, writing paper, stamps, moving expenses, etc.....	18.00
<b>Total.....</b>	<b>\$143.00</b>

**“WAGE-EARNERS’ BUDGETS.”**

In this book, Louise Bolard More again concludes that a well-nourished family of five in New York City needs at least \$6 per week for food. The average food expenditure for 39 families of five persons each was \$327.24 per year or \$6,293 per week. Considering \$6 a week or \$312 per year as 43.4% of the total expenditure, that being the average percentage expended for food in the 200 families under immediate consideration and approximately the average arrived at in the extensive investigation of the U. S. Department of Labor, the total expenditure for all purposes would be about \$720 a year. Making allowance for a larger proportion of surplus than was found in these families, in order to provide for the future, the minimum income should be from \$800 to \$900 per year.

**“FINANCING THE WAGE-EARNER’S FAMILY.”**

This book by Scott Nearing discusses in detail the question of the standard of living, but his chapter upon individual family budgets, with particular reference to a minimum New York City budget, contains the only information that would be useful for our purpose. This particular discussion is a criticism of a family budget obtained by Mrs. More.

The budget was prepared by an average Irish family, consisting of father, mother, and two boys, eight and nine years of age. The man was a steady, temperate, unskilled laborer, and the woman, who had considerable native thrift, was neat, honest and reliable.

The estimated expenditures were as follows:

	Per year.
Rent: 2 mos. at \$10; 7 mos. at \$12; 3 mos. at \$11.....	\$137.00
Food, from \$4 to \$7 a week.....	277.00
Drink (pint of beer at supper daily).....	36.40
Clothing.....	40.00
Light and fuel.....	52.00
Insurance from 50 to 75 cents a week.....	29.25
Papers, 11 cents a week.....	5.72
Church, 35 cents a week (for 50 weeks).....	17.50
Man's spending money.....	25.00
Sundries.....	2.03
<b>Total.....</b>	<b>\$622.50</b>
<b>Income.....</b>	<b>600.00</b>
<b>Deficit.....</b>	<b>\$22.50</b>



Upon analysis Mr. Nearing shows the cost of food to be slightly more than the 22c per man per day estimate, while the expenditure for clothing is abnormally low, so low in fact that it cannot be considered accurate. The housing was inadequate, with only three small dark rooms, the windows of two of these opening into an airshaft. There was no allowance whatsoever for recreation or health.

### "A LIVING WAGE."

For the purpose of comparing conditions in New York City with conditions elsewhere, the family budgets following are included. They are the result of a study made by John Augustine Ryan, as described in Chapter VII of his book—"A Living Wage." He compares two family budgets, one by the U. S. Commissioner of Labor in 1905, showing the average yearly cost of living for 2,132 families averaging 5.7 persons, the other a revision of this same budget showing the cost of living at minimum prices.

Family budget, from the seventh annual report of the Commissioner of Labor (1905).

Same budget revised to show the cost of living at minimum prices.

	Per year		Per year.
Food.....	\$287.06	Food.....	\$235.00
Rent (av. no. of rms. 4.7).....	72.58	Rent.....	84.00
Fuel.....	35.75	Fuel.....	30.00
Lighting.....	4.90	Lighting.....	4.90
Clothing.....	107.40	Clothing.....	107.40
Taxes (nearly ½ of families made no return for this).....	5.43	Insurance (property).....	5.00
Insurance (property).....	6.47	Insurance (life)	
Insurance (life).....	20.22	(Eliminated because he should have saved enough to provide for old age.)	
Organizations (labor).....	6.06	Organizations (labor).....	6.06
Organizations (other).....	6.60	Organizations (other).....	6.60
Religion.....	10.29	Religion.....	10.29
Charity.....	2.80	Charity.....	2.80
Furniture and utensils (an irreducible minimum).....	19.79	Furniture and utensils.....	19.79
Books and newspapers (school books included, ridiculously low).....	5.25	Books and newspapers.....	10.00
Amusements and vacations.....	9.36	Amusements and vacations.....	20.00
Intoxicating liquors.....	15.98	Intoxicating liquors.....	10.00
Tobacco.....	10.48	Tobacco.....	8.00
Sickness and death.....	22.31	Sickness and death (provided for by saving).....	
Other purposes.....	38.19	Other purposes.....	38.19
Total.....	\$687.02	Total.....	\$601.03

### Conclusions.

The total average of expenditures per family was \$610.61. The discrepancy arose from the fact that hundreds of families made no mention of several items.

(1) In New York, \$600 would not, even during periods of low prices, obtain the irreducible minimum of the revised column. It is not a living wage in New York City.

(2) Anything less than \$600 is not a living wage in cities of the United States.

(3) This sum is probably a living wage in certain cities of the South where goods and rent are cheaper.

**15.—MINIMUM STANDARDS OF FAMILY INCOME. (FROM  
CONDITIONS OF LABOR IN AMERICAN INDUSTRIES.  
LAUCK AND SYDENSTRICKER, 1917.)**

**The Point of Adequate Subsistence.**—The various recent investigations of budgets of families in different ranges of income appear to indicate quite clearly that the point of adequate subsistence is not reached until an income of about \$800 or \$900 is provided. The percentage of family income spent for food remains practically the same, or is greater, in families with incomes of less than that amount; in families with incomes of \$800 or more, the percentage of income spent for food is found to be proportionately less as income increases, indicating that only then is income sufficient to allow a surplus left from food, rent, etc., to be spent on "incidentals."

This conclusion was shown by the British Board of Trade's inquiry into the cost of living in American towns, in 1909, as well as by Chapin's New York investigation, in 1907, to which reference has already been made. "These figures," said Chapin, referring to the percentages in relation to income groups, "would seem to indicate that not until the family is able to spend well beyond \$1,000 does it satisfy its wants for food on a smaller proportion of its total income than when it had only \$600 or \$700 for all purposes. Whether this is due to insufficient nutrition or lower income, or to indulgence of more expensive tastes as resources increase, we may be able at a later point to suggest. Certainly the point of diminishing percentages of expenditure for food is placed much higher in the income scale than in the cases on which Engel based his well-known generalizations. <sup>(6)</sup>

Engel's generalizations were borne out quite positively with regard to expenditures for food by the Federal Bureau of Labor's Cost of Living Study in 1901, as the statistics already quoted in the chapter on Family Income and Expenditure shows. Chapin's more intensive study furnished further data, which are extremely interesting, regarding the proportion of underfed in the various income groups. An analysis of the nutrition values of the food of these families showed that the proportion of underfed families was as follows: <sup>(7)</sup>

<sup>6</sup> R. C. Chapin: *Standard of Living in New York City*, p. 123.

<sup>7</sup> *Ibid.*, p. 127. These analyses were made by Dr. F. R. Underhill, professor of physiological chemistry in Yale University, upon the scale of values adopted by the Federal Department of Agriculture.

FAMILY INCOMES AND PERCENTAGE OF UNDERFED FAMILIES IN EACH INCOME GROUP.

Family income.	Per cent of underfed families.	Family income.	Per cent of underfed families.
\$400-\$599.....	76	\$900-\$1,099.....	9
600- 799.....	32	1,100 and over.....	0
800- 899.....	22		

"This means," comments Professor Chapin, "that with less than \$600 to spend for all purposes, an adequate food supply is not provided, and that on from \$600 to \$800 incomes, one family in three is underfed, while less than one in ten of the families having \$900 and \$1,000 to spend fell short of the minimum for food." <sup>(8)</sup>

The point of inadequate subsistence has also been indicated by various investigations into the health of wage-working families and by mortality statistics. The relation of poverty to disease is discussed in greater detail in an earlier chapter, but it is perhaps significant to note that the careful studies of infant mortality by the Federal Children's Bureau point to a very definite line of adequate subsistence.

PER CENT OF FAMILIES UNDERFED, UNDERCLOTHED AND OVERCROWDED, BY INCOME.

Family income.	Number of families.	Under-fed.	Per cent which were				
			Under-clothed.	Over-crowded.	Under-fed and under-clothed.	Under-fed and over-crowded.	Under-clothed and over-crowded.
\$ 400-\$ 499.....	8	100	88	63	88	63	50
500- 599.....	17	65	88	71	59	47	53
600- 699.....	72	33	63	57	18	19	39
700- 799.....	79	30	52	58	14	19	35
800- 899.....	73	22	32	53	10	15	25
900- 999.....	63	8	25	40	3	6	11
1,000- 1,099.....	31	10	3	30	..	3	..
1,100- 1,199.....	18	..	6	21	..	..	..
1,200 and over.....	30	..	..	..	..	..	..
Total.....	391	..	..	..	..	..	..

The size of the families included in the above statistics was not less than four nor more than six persons, the average size in each income group being approximately five persons.

In a steel manufacturing town, Johnstown, Pa., for example, it was found that unless the family had an annual income of about \$800 or more, the death rate among infants was considerably above the average. <sup>(9)</sup> Using infant mortality as an indicator of healthful conditions of living, this can be interpreted only as meaning that a family could not provide sanitary housing, healthful environment and adequate food, or permit the mother to stay at home and not be a wage-earning member of the family, unless the family income was over \$800 a year.

**Studies of Minimum Standards of Family Income.**—With the foregoing evidence as to the point of adequate subsistence, the results of several intensive studies of minimum standards of family income tend to agree. Giving what seems to be due allowance for differences in

<sup>(8)</sup> Ibid, p. 128. Chapin also presented statistics as to underfed, underclothed and overcrowded families in the various income groups from which the following tabulation has been made (p. 241):

<sup>(9)</sup> United States Department of Labor, Children's Bureau: Infant Mortality—Results of a Field Study in Johnstown, Pa., p. 45. In families where the father earned less than \$521 a year, or less than \$10 a week, the infant mortality rate was 255.7, as contrasted with 130.7 for the community as a whole, and it was three times as high as in families where the father earned \$1,200 or more a year. In a similar investigation in Montclair, N. J., the Children's Bureau found that the infant mortality rate in families where the income was less than \$12 a week was more than twice as high as in families where the income was \$23 or more a week.



methods of investigation, in point of view, and in conditions considered, these studies by various authorities of actual conditions in workingmen's families may be said to strengthen the estimate that unless a family of the normal size <sup>(10)</sup> has an income of about \$800, <sup>(11)</sup> it cannot maintain such a standard of living as we have had in mind. It is generally agreed, of course, that a greater measure of health than this minimum would afford would be desirable, but approximately \$800 seems to be regarded as the least amount necessary after paring down all expenditures for food, clothing, rent, insurance, health, furnishings, recreation and incidentals to a degree that hardly seems possible with the utmost frugality.

The closeness with which these determinations have been made will be clearly evident if some of them are itemized in some detail and compared with an estimate submitted by a labor union composed of skilled workers and another for government employes. During 1915, five determinations and estimates of the minimum cost of maintaining a family appeared, two of them being made by the New York Factory Investigating Commission, one by the New York City Bureau of Standards, one by a representative of the legislative committee of the American Federation of Labor, one by the Amalgamated Association of Street and Electric Railways. The last named was an estimate used by representatives of street railway employes in the recent arbitration in Chicago. They are summarized for purposes of comparison in the table which follows.

These determinations are corroborated, in large measure, by other well-recognized investigations. For New York City, Professor Chapin, in 1907, arrived at the conclusion that "an income under \$800 is not enough to permit the maintenance of a normal standard" for a family of five persons; Mrs. Louise B. More's investigations in 1906 pointed to "at least \$728 a year"; and the special committee of the New York State Conference of Charities and Corrections reported in 1907 that a conservative estimate was that "\$825 is sufficient for the average family of five individuals"; Prof. J. C. Kennedy's investigations of the families of stockyard workers in Chicago caused him to conclude that no family of five could "live decently and efficiently in the stockyards district on less than \$800 a year."

(10) A family of five persons—father, mother, and three dependent children.

(11) R. C. Chapin: *Standard of Living in New York City*; L. B. More: *Wage-Earners' Budgets*; New York State Conference of Charities and Corrections committee on standards of living; M. Byington: *The Households of a Mill District*; Fourth Annual Report of the New York State Factory Investigating Commission, Vol. IV; New York City Bureau of Standards: *Report on the Cost of Living for an unskilled Laborer's Family*.



ESTIMATES OF ANNUAL COST OF LIVING FOR WAGE-WORKERS' FAMILIES IN NEW YORK CITY, BUFFALO, CHICAGO, AND WASHINGTON, BASED ON FAMILIES OF FIVE PERSONS.

Items of expenditure.	New York City Bureau of Standards. (c)	New York City Fac. Inv. Com. (a)	Buffalo, N. Y. Fac. Inv. Com. (a)	Chicago Street Railway Employees. (b)	Washing- ton, D. C. A. F. of L. Com. (d)
Food.....	\$380.00	\$325.00	\$281.00	\$529.13	\$274.00
Rent.....	168.00	200.00	120.00	240.00	240.00
Fuel and light.....	42.00	20.00	40.00	86.00	49.00
Clothing.....	104.00	140.00	140.00	167.25	153.00
Car fare.....	30.30	31.20	31.20	26.00	.....
Insurance.....	22.80	35.60	35.60	20.00	.....
Health.....	20.00	22.00	22.00	20.00	.....
Furnishings.....	18.00	7.00	7.00	65.50	35.00
Newspapers.....	5.00	5.63	5.63	3.00	.....
Recreation and amusements.....	40.00	50.00	50.00	7.50	.....
Miscellaneous.....	10.00	40.00	40.00	45.50	15.00
Total annual.....	\$840.18	\$876.43	\$772.43	\$1,209.88	\$766.00
Average weekly.....	\$16.15	\$16.85	\$14.85	\$23.24	\$14.73

(a) Fourth Annual Report of the New York Factory Investigating Commission, 1915, Vol. IV, p. 1668.

(b) American Federationist, October, 1915, p. 837.

(c) Report on the Cost of Living for an Unskilled Laborer's Family in New York City, submitted by the (New York City) Bureau of Standards.

(d) This estimate was presented by Arthur E. Holder, of the legislative committee of the American Federation of Labor, in support of the Nolan bill for a \$3-a-day minimum wage for government employees, at a hearing of the Committee on Labor, held on March 21, 1916. Mr. Holder stated that \$766 would "simply purchase a bare subsistence," and is "much below a decent living standard." "You will observe that I have tabooed every form of 'luxury,'" he was quoted as commenting: "Receiving \$765.95 a year, there could be no riding on street cars for this workingman's family, no tobacco, no candy, no books, no Sunday school contributions, nothing for the church; no newspapers, no movies, no lodge dues, no insurance, no postage stamps and no doctor's bills—for, of course, on the "substantial" diet purchased for 75 cents a day, a family of five would run no chance of ever getting sick. Moreover, the family must remain stationary—no births, no deaths, no accidents, no medicines, no doctors. In regard to 75 cents a day for food for a family of five, if there is a woman in the District of Columbia who can buy the food for that family with 75 cents, I will take off my hat to her as the greatest financier in America."

The Pittsburgh Survey's investigations in 1907 and 1908 concluded that \$1,291 was a sufficient family income, but \$200 more was allowed for "sundries" than is usually allowed in other estimates.

It seems hardly necessary to resort to scientifically ascertained facts as to actual living conditions to determine that \$800, in round numbers, is about as little as the ordinary family can live on if it lives healthfully, comfortably and efficiently. A glance at actual expenses for unquestionable necessities should be sufficient. It must be very evident that the family of average size living in the average industrial town, with an income of, say, \$800—if it must spend \$650 or \$700 for food, rent, clothing, and fuel and light—can have very little surplus for savings or extraordinary expenditures. Out of what is left "must come the funds for amusements and recreation, books, papers and magazines, lodge and union dues, benefit and insurance premiums, sickness, upkeep of household and kitchen furnishings, and the hundred-and-one incidental expenditures that are common even to the most frugal households. A death in the family is a heavy expense; the birth of an additional member of the family is a cause, not only of lessened family income in families where the wife is a wage-earner, but also of immediate expense and the promise of increasing cost in the future. For we are speaking of the 'average' family with an income of \$700 to \$800 a year, which is considered adequate if everything 'goes right.' But sometimes things 'go wrong.'" (12)

**The Workingman's Family and Higher Living Costs.**—No definite conception of the adequacy of wages and of family income is possible, of course, without taking into consideration the increase in the cost of living since 1900. There has been a great deal of the discussion of the "race" between wages and living costs, but, because of the lack of comprehensive and exact statistics, the most that can be said is that indications point to an extremely close race. It is manifestly unfair, as some statisticians have done, to measure wages in terms of retail food prices alone without determining whether the retail prices of other articles, of services, and of rent, have advanced as rapidly. At the same time, since expenditures for food constitute nearly half of the total expenditures of wage-working families, it is proper to conclude that a 60 per cent increase in the retail prices of the principal foods must entail sacrifices either in diet or in other lines of expenditure, or in both, unless wages have advanced to an equal degree. It appears to be very plain that in only a few occupations and trades has there been as much as a 60 per cent wage increase since 1900.

Whether average wages have or have not actually kept up with the total cost of maintaining the wage-worker's family is of scarcely less importance than two other considerations. One is that the family with an income of, say, \$650, which was found adequate to make ends meet in 1900, can not ordinarily make ends meet now, and there are many such families with equally as great demands and necessities as then. Even though the average family may, because of increases in wages and of the employment of its women and children, have kept its income apace with the advancing cost of living, the pressure of higher living cost

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(12) B. S. Warren and Edgar Sydenstricker: *Health Insurance—Its Relation to the Public Health*, Bulletin 76 of the U. S. Public Health Service, March, 1916.

still falls heavily upon those who are below the average. The other consideration is that the social standard of minimum subsistence has become more costly. New desires and new wants have been created, and it is impossible to assume that the wage-working family has not been affected in much the same way as the family of the business man, the banker, the office worker, or even the farmer. Certain changes in the manner of living have occurred that probably the wage-working family, as well as any other family, could well do without; there are other changes, however, which have been brought about in response to those wants whose creation has been the mark of advancing civilization. Good or bad, changes in the customs and manner of living can not be overlooked in considering the question of adequacy of wages and family income. They are social products for which we can blame the wage-working population least of all. The fact which is of distinct pertinence here is that even if the levels of prices and wages had remained without change since 1900, the cost of living would have increased, because the social standard of living has become more expensive. To live adequately to-day costs more than it did even ten or fifteen years ago, not simply because prices have gone up, but because our standards of health, comfort, and efficiency are more exacting, to say nothing of the cost of satisfying those new desires which we might do without.

Aside from these considerations, however, the facts, so far as they are available from statistical sources, of higher living costs in relation to wages and income deserve to be mentioned because of their importance in throwing light on present conditions. The statistics of full-time weekly wages furnished for a number of trades and industries by the Federal Bureau of Labor Statistics appear to indicate that up to 1915 the average increase has been between 25 and 30 per cent since 1900. <sup>(13)</sup>

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(13) See the discussion by I. M. Rubinow, Chief Statistician of the Ocean Accident and Guarantee Corporation: *The Trend of Real Wages*, *American Economic Review*, Dec., 1914, pp. 793-817.

The wage statistics used by Dr. Rubinow in his computation are those regularly published in the retail price bulletins of the Bureau of Labor Statistics, and cover cotton goods, woolen goods, silk, boots and shoes, knit goods, lumber, millwork, furniture, building trades, bakers, marble and stone cutting, foundry and machine shops and printing.

These figures are possibly too high, since the statistics may include a disproportionate number of well-unionized skilled trades whose wage rates have advanced more rapidly than those of unskilled occupations. In contrast may be presented statistics of prices. Unfortunately, statistics of retail prices are available only for foods <sup>(14)</sup>, but at least some idea of the advance in prices of other articles may be gained from the wholesale price statistics furnished by various governmental and commercial authorities. Selecting the statistics for those items of expenditure which we have seen to be the principal necessities, the advances in prices from 1900 to 1913 may be roughly stated as follows:

Item.	Per cent of increase 1900-1913
Food, retail (a).....	62
Food, wholesale.....	31-52
Clothing (and cloth), wholesale.....	16-20
Fuel, retail (coal, 1907-1913).....	5-10
Fuel and lighting, wholesale.....	17
Housing, wholesale prices of lumber and building materials....	31
Wages of building labor.....	45
Household furnishings, wholesale.....	11

The increased cost of maintaining the wage-working family can not, of course, be stated definitely on the basis of such statistics as the above, but a suggestive illustration is pertinent:

The extensive budgetary investigation of workingmen's families conducted by the Federal Bureau of Labor in 1901 <sup>(16)</sup>—before the advance in prices began to be markedly evident—found that the "normal" family was able to subsist and even have savings upon an income of between \$600 and \$700 a year, according to the standard of living then existing. <sup>(17)</sup> The average family in that range of annual income was found to have an expenditure of \$612 for all purposes at prices then prevailing. This amount was found to be spent approximately in the following manner:

Item.	Amount.	Per cent of total expenditure.
Food.....	\$266	43.5
Rent.....	113	18.5
Fuel and light.....	35	6.0
Clothing.....	79	13.0
Sundries.....	119	20.0

<sup>(14)</sup> See Bulletins of the U. S. Bureau of Labor Statistics on Retail Prices of Foods.

(a) Retail price data exist for only food and coal, and are supplied by the records of the Federal Bureau of Labor Statistics. For the other items only wholesale price data are available, and are therefore not adequately indicative of the full extent of their advance in the prices paid by the ultimate consumer. The wholesale price data are supplied by the Federal Bureau of Labor Statistics, Bradstreet's, R. G. Dun & Company, the New York Times Annalist, and Thomas Gibson. Where two figures are given in the summary for one item, the minimum and maximum results, as shown by different authorities, are indicated.

<sup>(16)</sup> See Eighteenth Annual Report of the U. S. Commissioner of Labor, 1903.

<sup>(17)</sup> By "normal" family was meant the family in which the man is the bread-winner and the wife non-wage-earning, and the children under fourteen years of age and dependent.



Applying the percentages of increase in the various items of expenditure, what would the same family have required to maintain the same standards in, say 1913, as it did before the great price advance began?

Wherever retail price data are available, they may, of course, be used. In the case of wholesale price data, it seems to be conservative to use the highest percentages computed from the various wholesale price authorities. In the case of rent, 35 is used as the percentage of increase, taking into consideration both the higher cost of building materials and the higher labor cost. This seems to be very conservative in the light of statistics of actual rent increases for shorter periods than the 1900-1913 period.

Upon this conservative basis, the following results appear (see table below).

Allowing for no increase in the cost of the "sundries" actually bought or necessitating expenditures, and for no increase in the number of "sundry" expenditures to meet the broadened and greater variety of wants in 1913, as compared with 1900, the cost of maintaining a family according to the same standard now as then would have been over \$200 greater, or an increase of 35 per cent.

Item of expenditure.	Amount expended in 1900.	Increase in price.	Amount necessary in 1913.
Food.....	\$266	62	\$430 (a)
Rent.....	113	35	152
Fuel and light.....	35	17	41
Clothing.....	79	8	85
Sundries.....	119	..	119
Total.....	\$612	..	\$827

(a) It is significant to note that the United States Public Health Service paid about 35 cents a day for a well-balanced ration sufficient to supply an adult male with 3,000 to 3,500 calories a day for its marine hospital employees, etc., in 1914. On this basis, the annual cost of food for a family as defined above (3.3 adult male units), would be approximately \$420 a year. The cost of the United States Public Health Service ration was based on retail prices prevailing during the year, and the food was purchased under annual contract. The contract prices would be somewhat lower than ordinary retail prices, but the quality of food was of the best grades. Hence the figure, \$430, is believed to be conservative.

## 16.—COST OF BREAD AMONG THE WORKERS.

—Memorandum by Frances Stern, Author of "Food for the Worker,"  
Associated with U. S. Food Administration.

(From the minutes of the Committee on Prices, August 27-29, 1917.)

The work with the people of the crowded district of Boston, and my association with them previous to the war, has led to serious thinking and many conferences with them since the increased cost of food, due to war conditions. The cry on every side is that it is almost impossible to live, and that every luxury—such as cake perhaps once a week—must be cut out. They complain a great deal of their necessity of life—flour and bread.

In the book, "Food for the Worker," seven weeks' menus have been very carefully worked out relative to food values and costs, and the cost of bread in that seven weeks of the total supply, which amounts to \$53.11, is about 25 per cent of the total. These menus have been carefully worked over by experts in nutrition and people familiar with the habits of the people for whom they were intended. Variety has been given, and as much meat and vegetables as the purse would allow; and yet to make the necessary requirements of food values, bread to the amount as heretofore stated would have to be 25 per cent. (Page 119).

In another group of flexible menus where different types of meals were planned, from the simplest to the elaborate, it was interesting to note that from twice to three times as much bread was needed with the simple meal as with the elaborate one. Which again leads us to see that people living on the one-piece meal must have bread to make up the required food value. It is desirable for them from many points of view: cost, ease in cooking, habit, nutrition, and a safe food for children.

On page 22 of "Food for the Worker," the following statement is made:

"It has been estimated that between \$800 and \$900 a year is the minimum figure at which a decent and efficient standard of living can be maintained for the typical family of five.

"In a recent study by Schereschewsky, it was found that in the group whose income was \$500 or less, **under-nourishment** and sickness were twice as great as in the groups earning \$700 to \$900. An average wage of an unskilled laborer is \$12 per week, or \$624 per year, if he is continuously employed. The man who earns this income, however, is on the average unemployed eight weeks out of the fifty-two. This period of unemployment without pay reduces his annual income to \$528. The cost of our menu is \$364 a year—an extremely conservative estimate. Lower estimates are possible, but fail to allow for one of our essential considerations—variety. The cost of our menu is 65 per cent of an income of \$528 per annum, and if we allow \$144 per year for rent, a fair average, only \$20 remains for all other needs of life for the family of five, such as fuel, light, clothing, car fares, insurance, medicine, and recreation."

**PROPORTION OF BREAD IN MENUS OF RICH AND POOR.  
DINNERS.**

	1.	2.	3.	4.	5.	6.
Soup.	Beef soup with vegetables.					
Meat.	1 Slice Roast	1 Slice Roast	1 Slice Roast	1 Slice Roast	Chicken	
Gravy.		Brown.	Brown.	-		
Vegetable—starchy.	1 baked potato	1 baked potato.	1 baked potato.		Rice.	Rice.
Vegetable—green.	Beets butter.	String beans butter.	2 H. T. Cauliflower creamed.	Lima beans and tomatoes.	Lima beans and tomatoes.	Lima beans and tomatoes.
Salad.	Tomato and lettuce.	Tomato and lettuce.			Lettuce.	
Dessert.	Dessert.	Dessert.	Prune jelly and sauce.	Dessert.	Dessert.	Dessert.
Bread.	1 slice.	2 slices.	1 slice.	1 slice.	$\frac{1}{2}$ slice.	2 slices.
Butter.	$\frac{1}{2}$ t. 1370	$\frac{1}{2}$ t. 1323	$\frac{1}{2}$ t. = $\frac{1}{4}$ oz. 1302	$\frac{1}{2}$ t. 1329	$\frac{1}{4}$ t. 1301	$\frac{1}{2}$ t. 1324

**BREAKFASTS**

	A.	B.	C.	D.	E.	F.	G.
Bread.	3 slices.	2 slices.	$2\frac{1}{2}$ slices.	$1\frac{1}{2}$ slices.	$1\frac{1}{2}$ slices.	2 slices.	1 slice.
Butter.	4 t.	2 t.	3 t.	2 t.	2 t.	2 t.	2 t.
Beverages with milk and sugar.	Coffee 1 cup.	Coffee 1 cup. Fried potatoes.	Milk 1 cup.	Milk 1 cup.	Coffee 1 cup.	Coffee 1 cup.	Coffee. 1 cup.
Cereal with milk and sugar.	4 t.	1 cup.		1 cup.	1 cup.		$1\frac{1}{2}$ cup.
Fruit.					Baked Apple.	Raw.	Berries.
Eggs.						2	
Meat.							2 chops.

## CHAPTER IV

### BIBLIOGRAPHY OF PUBLICATIONS OF THE UNITED STATES BUREAU OF LABOR STATISTICS.

#### Cost of living:

- \*First Annual Report. 1886. Industrial depressions: Appendix B. Earnings and expenses of wage receivers in Europe, pp. 411-456.
- \*Sixth Annual Report. 1890. Cost of production: Iron, steel, coal, etc. Cost of living, pp. 605-1376.
- Seventh Annual Report. 1891. Cost of Production: The textiles and glass. Part III. Cost of living, pp. 845-2013.
- \*Bul. 8, January, 1897. Retail prices of principal foods in Belgium, February 29, 1896,\*\* pp. 78, 79.
- \*Bul. 18, September, 1898.
  - Mechanics and workingmen's returns. Wisconsin, 1895,\*\* pp. 704, 705.
  - Workingmen's wages and budgets in 1853 and 1891, Belgium,\*\* pp. 708-713.
- Bul. 34, May, 1901. Labor conditions in Porto Rico, pp. 401-407, 413-424.
- Bul. 35, July, 1901. Statistics of wage earners in Colorado, 1899,\*\* p. 781.
- \*Bul. 37, November, 1901. Average yearly earnings and cost of living of working people, Maine, 1900,\*\* pp. 1171, 1172.
- Bul. 38, January, 1902. Labor conditions in Mexico, by Walter E. Weyl, pp. 70-73.
- \*1902. First report of the Commissioner of Labor on Hawaii, 1901 (S. Doc. No. 169, 56th Cong., 1st sess.), pp. 99-112, 241-253.
- Bul. 41, July, 1902. Labor conditions in Cuba, by Victor S. Clark, pp. 677-684, 740-748.
- Eighteenth Annual Report. 1903. Cost of living and retail prices of food.
- \*Bul. 46, May, 1903. Report of the Anthracite Coal Strike Commission, pp. 623-626.
- 1903. Second report of the Commissioner of Labor on Hawaii, 1902 (S. Doc. No. 181, 57th Cong., 2d sess.), pp. 222-228.
- Bul. 47, July, 1903. Second report of the Commissioner of Labor on Hawaii, pp. 896-902.
- \*Bul. 48, September, 1903. Negroes of Xenia, Ohio: A social study, by Richard R. Wright, jr., pp. 1036-1038.

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\*Supply exhausted.

\*\*Digest of State or Foreign report.



**Cost of Living—Continued.**

- \*Bul. 49, November, 1903.  
Analysis of eighteenth annual report, cost of living and retail prices of food, pp. 1137-1141.  
Massachusetts, 1902,\*\* pp. 1350, 1351.
- Bul. 53, July, 1904. Wages and cost of living, pp. 704-712.
- \*Bul. 54, September, 1904. Cost of living and retail prices in the United States, by G. W. W. Hanger, pp. 1129-1164.
- \*Bul. 56, January, 1905. Labor conditions in Australia, by Victor S. Clark, pp. 229-241.
- Bul. 58, May, 1905. Labor conditions in the Philippines, by Victor S. Clark, pp. 838-842.
- Bul. 58, May, 1905. Labor conditions in Java, by Victor S. Clark, pp. 943-946.
- \*Bul. 59, July, 1905.  
Retail prices of food, 1890 to 1904, pp. 148-301.  
Railroad employes, Austria, 1898,\*\* p. 330.
- \*Bul. 61, November, 1905. Labor conditions in Porto Rico, by Walter E. Weyl, pp. 776-778.
- \*Bul. 64, May, 1906. Conditions of living among the poor (District of Columbia), by S. E. Forman, pp. 598-617, 634-698.
- \*Bul. 65, July, 1906. Retail prices of food, 1890 to 1905, pp. 170-316.  
1906. Third report of the Commissioner of Labor on Hawaii, 1905 (H. Doc. No. 580, 59th Cong., 1st sess.), pp. 110-119, 309-317.
- \*Bul. 66, September, 1906. Third report of the Commissioner of Labor on Hawaii, pp. 467-476, 663-671.
- \*Bul. 71, July, 1907. Retail prices of food, 1890 to 1906, pp. 175-328.
- \*Bul. 73, November, 1907.  
New Jersey, 1906,\*\* p. 992.  
Washington, 1906,\*\* p. 996.
- \*Bul. 77, July, 1908.  
Wages and hours of labor in manufacturing industries, 1890 to 1897, pp. 1-180.  
Report of British Board of Trade on cost of living of the working classes of principal industrial towns of Great Britain, 1905,\*\* pp. 336-354.
- \*Bul. 78, September, 1908. Report of British Board of Trade on cost of living of the working classes of the principal industrial towns of the German Empire, 1905,\*\* pp. 523-548.
- Bul. 83, July, 1909. Report of British Board of Trade on cost of living of the working classes in the principal industrial towns of France, 1905,\*\* pp. 66-87.
- \*Bul. 87, March, 1910. Report of British Board of Trade on cost of living of the working classes in the principal industrial towns of Belgium, 1908,\*\* pp. 608-625.

**Cost of Living—Continued.**

- Bul. 88, May, 1910. Report of Imperial Statistical Office of Germany on cost of living of families of moderate income in Germany in 1907-1908,\*\* pp. 697-794.
- \*1910. Increase in cost of food and other products (12 tables) (S. Doc. No. 349, 61st Cong., 2d sess.).
- \*Bul. 93, March, 1911.  
Report of British Board of Trade on cost of living in principal industrial cities in the United States, 1909,\*\* pp. 500-556.  
Reports of British Board of Trade on cost of living in England and Wales, Germany, France, Belgium, and the United States, 1908-1911,\*\* pp. 557-570.
- \*1911. Fourth report of the Commissioner of Labor on Hawaii, 1910 (S. Doc. No. 866, 61st Cong., 3d sess.), pp. 103, 104, 128-141.
- \*Bul. 94, May, 1911. Fourth report of the Commissioner of Labor on Hawaii, pp. 764, 765, 786-799.
- \*1912. Strike of textile workers in Lawrence, Massachusetts, 1912 (S. Doc. No. 870, 62d Cong., 2d sess.), pp. 165-186, 486-491.
- \*Bul. 105, August 23, 1912.  
\*Retail prices, 1890 to 1911. Part I.  
\*Retail prices, 1890 to 1911. Part II. General tables.
- Bul. 106, August 28, 1912.  
\*Retail prices, 1890 to 1912. Part I.  
Retail prices, 1890 to 1912. Part II. General tables.
- Bul. 108, October 1, 1912. Retail prices, 1890 to August, 1912.
- Bul. 110, December 4, 1912. Retail prices, 1890 to October, 1912.
- \*1910-1912. Report on condition of woman and child wage earners in the United States (S. Doc. No. 645, 61st Cong., 2d sess.).
- \*Vol. XVI. Family budgets of typical cotton mill workers.
- Bul. 113, March 18, 1913. Retail prices, 1890 to December, 1912.
- Bul. 115, April 8, 1913. Retail prices, 1890 to February, 1913.
- Bul. 121, May 14, 1913. Sugar prices, from refiner to consumer, by N. C. Adams.
- Bul. 125, June 28, 1913. Retail prices, 1890 to April, 1913.
- \*Bul. 130, August 15, 1913. Wheat and flour prices, from farmer to consumer, by J. Chester Bowen.
- Bul. 132, August 15, 1913. Retail prices, 1890 to June, 1913.
- Bul. 136, September 15, 1913. Retail prices, 1890 to August, 1913.
- Bul. 138, December 1, 1913. Retail prices, 1890 to October, 1913.
- Bul. 140, February 10, 1914. Retail prices, 1890 to December, 1913.
- Bul. 156, March, 1915. Retail prices, 1907 to December, 1914.
- Bul. 164, November 30, 1914. Butter prices, from producer to consumer, by Newton H. Clark.
- Bul. 170, May, 1915. Foreign food prices as affected by the war.

\*Supply for distribution exhausted.

\*\*Digest of State or Foreign report.

**Wholesale prices:**

- \*Bul. 27, March, 1900. Wholesale prices, 1890 to 1899, by Roland P. Falkner, pp. 237-313.
- Bul. 39, March, 1902. Course of wholesale prices, 1890 to 1901, pp. 195-485.
- Bul. 45, March, 1903. Course of wholesale prices, 1890 to 1902, pp. 203-356.
- \*Bul. 51, March, 1904. Course of wholesale prices, 1890 to 1903, pp. 219-379.
- \*Bul. 54, September, 1904. Wholesale prices in the United States, 1890 to 1903, by G. W. W. Hanger, pp. 1165-1186.
- \*Bul. 57, March, 1905. Course of wholesale prices. 1890 to 1904, pp. 389-549.
- \*Bul. 63, March, 1906. Course of wholesale prices, 1890 to 1905, pp. 338-502.
- Bul. 69, March, 1907. Wholesale prices, 1890 to 1906, pp. 239-420.
- \*Bul. 75, March, 1908. Wholesale prices, 1890 to 1907, pp. 283-471.
- \*Bul. 81, March, 1909. Wholesale prices, 1890 to 1908, pp. 195-382.
- \*Bul. 87, March, 1910. Wholesale prices, 1890 to March, 1910, pp. 377-582.
- \*Bul. 93, March, 1911. Wholesale prices, 1890 to 1910, pp. 309-499.
- Bul. 99, March, 1912. Wholesale prices, 1890 to 1911, pp. 501-692.
- Wholesale prices in Canada, 1890 to 1911,\*\* pp. 693-695.
- \*1913. Increase in prices of anthracite coal following the wage agreement of May 20, 1912 (H. Doc. No. 1442, 62d Cong., 3d sess.).
- Bul. 114, April 4, 1913. Wholesale prices (United States and Canada), 1890 to 1912.
- Bul. 121, May 14, 1913. Sugar prices, from refiner to consumer, by N. C. Adams.
- \*Bul. 130, August 15, 1913. Wheat and flour prices, from farmer to consumer, by J. Chester Bowen.
- Bul. 149, May 11, 1914. Wholesale prices, 1890 to 1913.
- Bul. 164, November 30, 1914. Butter prices, from producer to consumer, by Newton H. Clark.
- Bul. 170, May, 1915. Foreign food prices as affected by the war.

**Retail prices:**

- \*Bul. 3, March, 1896. Rhode Island, 1894,\*\* p. 279.
- \*Bul. 8, January, 1897. Retail prices of principal foods in Belgium, 1896,\*\* pp. 78, 79.
- \*Bul. 18, September, 1898. Comparative wages and prices in Massachusetts, 1872 to 1897,\*\* pp. 694-697.
- \*1902. First report of the Commissioner of Labor on Hawaii, 1901 (S. Doc. No. 169, 57th Cong., 1st sess.), pp. 97-99, 232-237.
- Eighteenth Annual Report. 1903. Cost of living and retail prices of food, Part II, pp. 635-853.
- 1903. Second report of the Commissioner of Labor on Hawaii, 1902 (S. Doc. No. 181, 57th Cong., 2d sess.), pp. 222-228.

\*Supply for distribution exhausted.

\*\*Digest of State or Foreign report.

## Retail Prices—Continued.

- Bul. 47, July, 1903. Second report of the Commissioner of Labor on Hawaii, 1902, pp. 896-902.
- \*Bul. 54, September, 1904. Cost of living and retail prices in the United States, by G. W. W. Hanger, pp. 1129-1164.
- \*Bul. 59, July, 1905. Retail prices of food, 1890 to 1904, pp. 148-301. 1906. Third report of the Commissioner of Labor on Hawaii, 1905 (H. Doc. No. 580, 59th Cong., 1st sess.), pp. 309-317.
- \*Bul. 65, July, 1906. Retail prices of food, 1890 to 1905, pp. 171-316.
- \*Bul. 66, September, 1906. Third report of the Commissioner of Labor on Hawaii, pp. 663-671.
- \*Bul. 71, July, 1907. Retail prices of food, 1890 to 1906, pp. 175-328.
- \*Bul. 77, July, 1908. Retail prices of food, 1890 to 1907, pp. 181-332.
- Bul. 83, July, 1909. Cost of living of the working classes in the principal industrial towns of France, 1905,\*\* pp. 71-80.
- Bul. 84, September, 1909. Sweden, 1904 to 1907,\*\* pp. 410, 411.
- \*1910. Increase in cost of food and other products (12 tables). (S. Doc. No. 349, 61st Cong., 2d sess.)
- \*Bul. 87, March, 1910. Cost of living of the working classes in the principal industrial towns of Belgium, 1908,\*\* pp. 612-619.
- \*1911. Fourth report of the Commissioner of Labor on Hawaii, 1910 (S. Doc. No. 866, 61st Cong., 3d sess.), pp. 103, 104, 135-141.
- \*Bul. 93, March, 1911. Reports of British Board of Trade on cost of living in England and Wales, Germany, France, Belgium, and the United States, 1908 to 1911,\*\* pp. 566-569.
- \*Bul. 94, May, 1911. Fourth report of the Commissioner of Labor on Hawaii, pp. 793-799.
- \*1912. Strike of textile workers in Lawrence, Massachusetts, in 1912 (S. Doc. No. 870, 62d Cong., 2d sess.), pp. 165-182.
- \*Bul. 105, August 23, 1912.
- \*Retail prices, 1890 to 1911. Part I.
- \*Retail prices, 1890 to 1911. Part II: General tables.
- Bul. 106, August 28, 1912.
- \*Retail prices, 1890 to June, 1912. Part I.
- Retail prices, 1890 to June, 1912. Part II: General tables.
- Bul. 108, October 1, 1912. Retail prices, 1890 to August, 1912.
- Bul. 110, December 4, 1912. Retail prices, 1890 to October, 1912.
- \*1913. Increase in prices of anthracite coal following the wage agreement of May 20, 1912 (H. Doc. No. 1442, 62d Cong., 3d sess.), pp. 67-82.
- Bul. 113, March 18, 1913. Retail prices, 1890 to December, 1912.
- Bul. 115, April 8, 1913. Retail prices, 1890 to February, 1913.
- Bul. 121, May 14, 1913. Sugar prices, from refiner to consumer, by N. C. Adams.
- Bul. 125, June 28, 1913. Retail prices, 1890 to April, 1913.
- \*Bul. 130, August 15, 1913. Wheat and flour prices, from farmer to consumer, by J. Chester Bowen.

\*Supply for distribution exhausted.

\*\*Digest of State or Foreign report.



- Bul. 132, August 15, 1913. Retail prices, 1890 to June, 1913.  
 Bul. 136, September 15, 1913. Retail prices, 1890 to August, 1913.  
 Bul. 138, December 1, 1913. Retail prices, 1890 to October, 1913.  
 Bul. 140, February 10, 1914. Retail prices, 1890 to December, 1913.  
 Bul. 156, March, 1915. Retail prices, 1907 to December, 1914.  
 Bul. 164, November 30, 1914. Butter prices, from producer to consumer, by Newton H. Clark.  
 Bul. 170, May, 1915. Foreign food prices as affected by the war.  
 Bul. 197, Retail prices, 1907 to December, 1917 (In Preparation).  
 Bul. 228, October, 1917. Retail prices, 1907 to 1916 (In Press).
- 

## BIBLIOGRAPHY OF REFERENCES TO COST OF LIVING, FOOD CONTROL, PRICES, ETC., APPEARING IN THE MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

### SPECIAL ARTICLES.

#### General.

#### United States.

- Minimum wage rate based on cost of living for unskilled laborers of New York City.  
 October, 1915, pp. 18-21.  
 July, 1917, pp. 138-140.
- Cost of living of working women in Ohio.  
 February, 1916, pp. 51-56.
- Report of New York State Factory Investigating Commission. Cost of Living, Vol. IV, p. 1461.  
 February, 1916, pp. 89-94.  
 December, 1915, p. 76. (Brief reference only.)
- Cost of living in the State of Washington.  
 August, 1916, pp. 31, 32.
- Cost of living in Massachusetts.  
 June, 1917, pp. 959, 960.
- Supply of food in the District of Columbia.  
 June, 1917, pp. 957-959.
- Cost of living in Dallas, Texas.  
 July, 1917, pp. 136, 137.
- Establishment and operation of municipal public markets.  
 July, 1917, pp. 131-135.
- Conditions of trade in food products.  
 August, 1917, pp. 56-59.
- Waste in food distribution in New York.  
 September, 1917, pp. 95-98.
- Organization under the act to control food and fuel.  
 September, 1917, pp. 67-71.

**United States—Continued.**

Progress of food and fuel control in the United States, etc.

November, 1917, pp. 80-91.

December, 1917, pp. 95-99.

Cost of living in the District of Columbia.

October, 1917, pp. 1-17.

November, 1917, pp. 1-12.

December, 1917, pp. 1-18.

**Foreign Countries:**

Food control in Germany and Great Britain.

December, 1917, pp. 99-101.

Prices and cost of living in Canada.

April, 1916, pp. 51-54.

Profits in food in Canada.

August, 1917, p. 60.

Government control of food supplies in European countries.

March, 1917, pp. 390-407.

Government control of food supplies in France.

April, 1917, pp. 525-533.

June, 1917, pp. 915-921.

High cost of living bonus in Germany.

June, 1917, pp. 945-949.

Government control of food supplies in Germany.

June, 1917, pp. 921-928.

July, 1917, pp. 66-69.

May, 1917, pp. 703-727.

High cost of living conference in Gottenborg, Sweden, June, 1917.

October, 1917, p. 65.

Government control of food supplies in Great Britain.

June, 1917, pp. 928-945.

July, 1917, pp. 69-78.

Food policy framed by national committee of British workers.

July, 1917, pp. 78-80.

Food control in Great Britain.

November, 1917, pp. 91-104.

Government control of food supplies in Italy.

May, 1917, pp. 727-744.

Cost of living in workmen's families in Portugal.

July, 1917, pp. 137, 138.

Minimum cost of living of workmen's families in Basle, Switzerland.

September, 1917, pp. 144, 145.

Cost of living and the minimum wage in New South Wales.

February, 1917, pp. 296-299.

**SPECIAL ARTICLES—PRICES.****United States:**

Analysis and cost of ready-to-serve foods.

November, 1916, pp. 46-48.

Comparison of changes in prices of wheat and flour and in weight and prices of bread, May to September, 1916.

November, 1916, pp. 41-46.

Retail prices of anthracite coal. Interim report of the Federal Trade Commission, May 4, 1917.

June, 1917, pp. 949-952.

Retail prices of bread.

October, 1916, pp. 29-31.

Retail prices of bread in the District of Columbia.

June, 1917, pp. 954-957.

Union wage scales and retail prices of food.

April, 1917, pp. 584, 585.

**Foreign Countries:**

Foreign food prices as affected by the war.

July, 1915, pp. 42-44.

Increase in retail prices of coal in Great Britain.

July, 1915, pp. 45-56.

Increase of prices of commodities in Great Britain.

January, 1917, pp. 51-56.

Wholesale prices in Great Britain.

April, 1917, pp. 586-588.

Prices and wages in India.

November, 1917, pp. 75-79.

Retail prices in the Scandinavian capitals.

August, 1917, pp. 60-62.

**WHOLESALE AND RETAIL PRICES IN THE UNITED STATES AND FOREIGN COUNTRIES.****WHOLESALE.****United States:**

Monthly Review, February, 1916, pp. 33, 34.

September, 1916, pp. 43-45.

April, 1917, pp. 585, 586.

July, 1917, pp. 128-131.

August, 1917, pp. 54, 55.

September, 1917, pp. 91, 92.

October, 1917, pp. 57-59.

December, 1917, p. 94.

**RETAIL.****United States:**

- Monthly Review, September, 1915, p. 46.  
 October, 1915, pp. 43, 44.  
 February, 1916, p. 32.  
 March, 1916, pp. 31, 33.  
 April, 1916, pp. 49-51.  
 May, 1916, pp. 39-41.  
 June, 1916, pp. 42-45.  
 July, 1916, pp. 78-80.  
 August, 1916, pp. 30, 31.  
 September, 1916, pp. 40-42.  
 October, 1916, pp. 28, 29.  
 November, 1916, pp. 38-41.  
 December, 1916, pp. 20-22.  
 January, 1917, pp. 47-51.  
 February, 1917, pp. 240, 243.  
 March, 1917, pp. 385-390.  
 April, 1917, pp. 583, 584.  
 May, 1917, pp. 701-703.  
 June, 1917, pp. 952-954.  
 August, 1917, p. 53.  
 September, 1917, pp. 92-94.  
 October, 1917, pp. 60-64.  
 November, 1917, pp. 67-73.  
 December, 1917, pp. 83-90.

**Foreign Countries:**

- Monthly Review, September, 1915, pp. 46-57.  
 December, 1915, pp. 44-53.  
 March, 1916, pp. 80-85.  
 July, 1916, pp. 80-92.  
 November, 1916, pp. 49-60.  
 February, 1917, pp. 244-251.  
 June, 1917, pp. 961-973.

**WHOLESALE AND RETAIL.****United States:**

- Monthly Review, November, 1917, pp. 73-75.  
 December, 1917, pp. 90-93.

**Foreign Countries:**

- Monthly, Review, October, 1915, pp. 44-49.



**BIBLIOGRAPHY OF OFFICIAL AND UNOFFICIAL REPORTS  
CONTAINING REFERENCES TO COST OF LIVING, FOOD,  
PRICES, ETC.**

**OFFICIAL.**

**United States:**

Department of Commerce. Bureau of Foreign and Domestic Commerce. Wholesale prices of leading articles in the United States markets, January, 1913, to December, 1915. Washington, 1916. May, 1916, p. 89.

Congress. Senate: Hearing before Committee on Agriculture and Forestry, relative to the proposal for increasing the production, improving the distribution and promoting the conservation of food supplies in the United States. Washington, 1917. Part 1, 73 pp. Part 2, 198 pp.

June, 1917, p. 1030.

Department of Agriculture. Office of Markets and Rural Organization. Survey of typical co-operative stores in the United States. Washington, Nov. 3, 1916. 32 pp.

January, 1917, p. 163.

California. Industrial Welfare Commission. First biennial report, 1913 to 1914.

August, 1915, p. 31.

New Jersey. Department of Labor. Thirty-ninth annual report of the Bureau of Industrial Statistics for the year ending October 31, 1916. Trenton, 1917, 275 pp.

December, 1917, p. 249.

Massachusetts. (Boston). City planning board. A summary of the market situation in Boston. Preliminary report of the market advisory committee, June, 1915. Boston, 1916. 175 pp.

March, 1917, p. 489.

New York City. Board of Estimate and Apportionment. Report on market system for New York City, etc. 121 pp.

November, 1916, p. 141.

Philippine Islands. Bureau of Labor. Fourth annual report for fiscal year ended June 30, 1913. Manila, 1913. 73 pp.

October, 1915, pp. 89, 90.

Porto Rico, Bureau of Labor. Fifth annual report. San Juan, 1917. 34 pp.

November, 1917, p. 227.

**Foreign Countries:**

- Australia. Bureau of Census and Statistics. Labor and Industrial Branch. Melbourne.  
 Report No. 4: Review, August, 1915, p. 50.  
 Report No. 7: Review, December, 1917, p. 251.
- Australia. Department of Home Affairs. Digest No. 25, 30th of September, 1916. Melbourne. 275 pp.  
 January, 1917, p. 164.
- Canada. Board of Inquiry into the Cost of Living. Report. Ottawa, 1915. 2 vols.  
 April, 1916, p. 97.
- Canada. Canadian Food Bulletin No. 1. Oct. 6, 1917. Ottawa. 8 pp.  
 November, 1917, p. 230.
- Canada. Census and Statistics Office. The Canada Year Book, 1914. Ottawa, 1915. 698 pp.  
 January, 1916, p. 69.
- Canada. Census and Statistics Office. Year Book, 1915. Ottawa 1916. 707 pp.  
 February, 1917. p. 306.
- Canada. Department of Labor. Report for the fiscal year ending March 31, 1916. Ottawa, 1916. 121 pp.  
 January, 1917. p. 165.
- Canada. Department of Labor. Wholesale prices, Canada, 1914. Ottawa, 1915. 259 pp.  
 September, 1915. pp. 66, 67.
- Canada. Order of his Excellency the Administrator in Council of the 10th of November, 1916, respecting the high cost of living, as amended by order in council of 29th of November, 1916. (Ottawa). 3 pp.  
 June, 1917, p. 1032.
- Canada. Sixth annual report on wholesale prices, 1915. Ottawa, 1916. 312 pp.  
 November, 1916, pp. 144, 145.
- Denmark. Statens Statistiske Department. Statistisk aarbog, 1915. Copenhagen, 1915. 230 pp.  
 April, 1916, p. 97.
- Egypt. Statistical Department. Annuaire Statistique de l'Egypte, 1915. Cairo, 1916. 388 pp.  
 July, 1916, p. 162.
- Finland. Statistiska Centralbyran. Statistisk Årsbok for Finland. Ny Serie. Tofte Argangen, 1914. Helsingfors, 1915. 649 pp.  
 September, 1915, p. 69.
- France. Bureau de la Statistique Generale. Annuaire Statistique Trente-Troisieme Volume. 1913. Paris, 1914. 338, 239 pp.  
 September, 1915, p. 69.

**Foreign Countries—Continued.**

Germany. (Prussia.) Statistisches Landesamt. Statistisches Jahrbuch für den Preussischen Staat, 1913. Vol. II. Berlin, 1914. 693 pp.

April, 1916, p. 100.

Germany. Reichversicherungsamt. Vierteljahrshefte zur Statistik des Deutschen Reichs. 24 Jahrgang, 1915. Zweites Heft. Mit 11 Tafeln. Berlin, 1915. 229 pp.

December, 1915, pp. 85, 86.

Germany. (Saxony.) Statistisches Landesamt. Statistisches Jahrbuch für das Königreich Sachsen. Vol. 42, 1914-1915. Dresden, 1915. 362 pp.

April, 1916, p. 101.

Great Britain. Board of Education. Economy in food, etc. London, 1915. 31 pp.

January, 1916, p. 71.

Great Britain. India Office. Statistical abstract relating to British India. 1904-5 to 1913-14. 49th number. London, 1916. 285 pp.

June, 1916, p. 126.

India. Statistical Department. Prices and wages in India, 31st issue. Calcutta, 1915. vi., 226 pp.

November, 1915, pp. 96, 97.

Italy. Direzione Generale della Statistica e del Lavoro. Annuario Statistico Italiano, anno 1915. Series II, Vol. 5. Rome, 1916. 435 pp.

August, 1917, p. 199.

Italy. Ispettorato Generale del Commercio. Indici economici, 1903 to 1914. Rome, 1915, 2 Vols.

April, 1916, p. 103.

Japan. Department of Finance. The 15th Financial and Economic Annual of Japan, 1915. Tokyo.

September, 1916, p. 106.

New Zealand. Board of Trade. Report on coal prices at Auckland, Wellington, 1916, 3 p.

December, 1916, p. 139.

New Zealand. Department of Labor. 24th annual report, 1915. Wellington, 1915.

January, 1916, p. 76.

New Zealand. (Registrar General's Office.) Official year book, 1916. Wellington, 1917. 710 pp.

August, 1917, p. 199.

Norway. Arbeidskontor. Statistiske kontor. Husholdningeregnskaper fort av endel mindre bemidlede familier i Kristiania, etc. Utgit ved Kristiania kommunes statistiske kontor. Christiania, 1915. 179 pp.

May, 1916, p. 97.

**Foreign Countries—Continued.**

New Zealand. Registrar General's Office. Report on the cost of living in New Zealand, 1891 to 1914. Wellington, 1915. 168 pp.  
February, 1916, pp. 110, 111.

Norway. Statistiske kontor. Fortsaetelse av specialunderskelse nr. III angaaende prisbevaegelsen paa livsforndenheter i Kristiania samt statistiske opgaver angaaende de kommunale funktionaerers forsighelsesbyrde. Christiania, 1916. 24 pp.  
August, 1916, p. 102.

Norway. Statistiske Centralbyraa. Husholdningeregnskaper for handelsfunktionaerer m. v. Utgit av det Statistiske Centralbyraa. Christiania, 1915.  
January, 1916, pp. 78, 79.

South Africa. Director of Census. Statistical year book of the Union of South Africa containing statistics for the year 1913-14. No. 2. Pretoria, 1915. 333 pp.  
November, 1915, pp. 98, 99.

South Africa. Director of Census. Statistical year book of the Union of South Africa. No. 3, 1914-15. Pretoria, 1916. 359 pp.  
August, 1916, p. 103.

Sweden. Dyrtidskongressen (Stockholm), 1916. Kort redogorelse for anledningarna till dyrtidskongressens hallande, dess organisation, program och deltagare samt de vid dyrtidskongressen och vid konferensen med livsmedelsnamndernas ombud forda protokollen. (Stockholm, 1917) 165 pp.  
October, 1917, p. 191.

Sweden. Socialstyrelsen Levnadskostnaderna i Sverige, 1913-14. Del II. Lokalmonografier. 1. Vasteras.  
May, 1917, pp. 801, 802.

The Netherlands. Centraal Bureau voor de Statistiek. Jaarcijfers voor het Koninkrijk der Nederlanden. 1913. The Hague, 1914. 360 pp.  
September, 1915, p. 74.

The Netherlands. Centraal Bureau voor de Statistiek. Jaarcijfers voor het Koninkrijk der Nederlanden Rijk in Europa, 1914. The Hague, 1915. 375 pp.  
September, 1916, pp. 106, 107.

---

**UNOFFICIAL.**

Birge, Wm. S. True food values and their low costs, or economy in living. New York, Sully & Kleinteich, 1916. 218 pp.  
December, 1916, p. 142.



- Boucke, O. Fred. Rising costs of living. George Banta Publishing Co. Menasha, Wis., 1916. 87 pp.  
 May, 1917, p. 803.
- Chance, Lady. Housekeeping on 25s. (\$6.08) a week or under. Published by the National Food Economy League, London. 16 pp.  
 September, 1916, p. 113.
- Congdon, Leon A. Fight for food. Philadelphia, Lippincott, 1916, 207 pp.  
 December, 1916, p. 143.
- Consumers' League of the District of Columbia. 4th report, March, 1915, to October, 1916. 40 pp.  
 January, 1917, p. 172.
- Gibbs, Winifred Stuart. The minimum cost of living. Macmillan, New York, 1917. 93 pp.  
 June, 1917, 1037.
- New Zealand Employers' Federation. Industrial bulletin. Wellington, April 5, 1917, Vol. 2, No. 3.  
 August, 1917, p. 206.
- Rose, Mary S. Feeding the family. New York, Macmillan, 1916. 449 pp.  
 December, 1916, p. 146.
- Stern, Frances, and Spitz, Gertrude T. Food for the worker, etc. Boston, Whitcomb & Barrows, 1917. 131 pp.  
 October, 1917, p. 195.

---

### PERIODICAL PUBLICATIONS LISTED, CONTAINING REFERENCES TO THE COST OF LIVING, FOOD PRICES, ETC.

- Argentina. Departamento Nacional del Trabajo. Boletin. Buenos Aires.  
 Apr. 30, 1915.....Review, Oct., 1915, p. 106.  
 July, 1915.....Dec., 1915, p. 96.
- Australia. Bureau of Census and Statistics. Labor and Industrial Branch. Labor Bulletin. Melbourne.  
 Apr.-June, 1914; July-Sept., 1914 Review, Aug., 1915, p. 68.  
 Jan.-Mar., 1915.....Dec., 1915, p. 96.  
 July-Sept., 1915.....Apr., 1916, p. 109.  
 Oct.-Dec., 1915.....July, 1916, p. 165.
- Canada. Department of Labor. Labor Gazette. Ottawa.  
 Jan., Feb., Mar., Apr.,  
 May, 1915.....Review, Aug., 1915, pp. 68, 70.  
 July, 1915.....Sept., 1915, p. 80.  
 Aug., 1915.....Oct., 1915, p. 106.  
 Sept., 1915.....Nov., 1915, pp. 100, 101.  
 Oct., 1915.....Dec., 1915, p. 96.  
 Nov., 1915.....Jan., 1916, p. 85.  
 Dec., 1915.....Feb., 1916, p. 115.  
 Jan., 1916.....Mar., 1916, p. 104.  
 Feb., 1916.....Apr., 1916, p. 109.  
 May, 1916.....July, 1916, p. 165.  
 July, 1916.....Sept., 1916, p. 109.  
 Oct., 1916.....Dec., 1916, p. 138.

## Periodicals—Continued.

- Chile. Boletin de la Oficina del Trabajo. Santiago de Chile. Biennial.  
Second half, 1914.....Review, Apr., 1916, p. 109.
- Denmark. Statistiske Efterretninger, udgivet af det statistiske Departement. Copenhagen.  
Jan. 5 to June 14, 1915.....Review, Aug., 1915, p. 70.  
June 30, 1915.....Sept., 1915, p. 80.  
July 24, 1915.....Oct., 1915, p. 107.  
Aug. 28, 1915.....Nov., 1915, p. 101.  
Aug. 21, and Oct. 2., 1915.....Dec., 1915, p. 96.  
Oct. 30, 1915.....Jan., 1916, p. 85.  
Dec. 1, 1915.....Feb., 1916, p. 116.  
Dec. 28, 1915.....March, 1916, p. 104.  
Feb. 25, 1916.....Apr., 1916, p. 109.  
Apr. 3 and 19, 1916.....June, 1916, p. 130.  
May 26, 1916.....Aug., 1916, p. 105.  
July 6, 1916.....Sept., 1916, p. 109.
- Finland. Arbetsstatistisk Tidskrift utgifven af Industristyrelsen. Helsingfors.  
No. 4, 1915.....Review, Nov., 1915, p. 101.  
No. 5, 1915.....Dec., 1915, p. 96.  
No. 6, 1915.....March, 1916, p. 104.
- France. Bulletin du Ministere du travail et de la Prevoyance Sociale. Paris.  
Oct., Nov., Dec., 1914.....Review, Aug., 1915, pp. 70, 71.  
Jan., Feb., Mar., Apr., 1915.....Sept., 1915, p. 81.  
May, June, 1915.....Dec., 1915, p. 97.  
July, Aug., 1915.....Jan., 1916, p. 85.  
Sept., Oct., 1915.....March, 1916, p. 104.  
Nov., Dec., 1915.....May, 1916, p. 101.  
Jan., Feb., 1916.....July, 1916, p. 165.
- Germany. Reichsarbeitsblatt, Herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung fur Arbeitstatistik. Berlin.  
May, 1915.....Review, Aug., 1915, p. 72.  
Aug., Sept., 1915.....Nov., 1915, p. 101.  
Feb., 1916.....May, 1916, p. 101.
- Great Britain. The Board of Trade Labor Gazette. London.  
Jan., Feb., Mar., Apr.,  
May, 1915.....Review, Aug., 1915, pp. 72, 73.  
June, July, 1915.....Sept., 1915, pp. 81, 82.  
Aug., Sept., 1915.....Nov., 1915, pp. 101, 102.  
Oct., 1915.....Dec., 1915, p. 97.  
Nov., 1915.....Jan., 1916, p. 86.  
Dec., 1915.....Feb., 1916, p. 116.  
Jan., 1916.....March, 1916, p. 105.  
Feb., 1916.....April, 1916, p. 109.  
March, 1916.....May, 1916, p. 101.  
April, 1916.....June, 1916, p. 130.  
May, 1916.....July, 1916, p. 166.  
June, 1916.....Aug., 1916, p. 105.  
Aug., 1916.....Oct., 1916, p. 102.

## Periodicals—Continued.

Italy. Bolletino dell' Ufficio del Lavoro, Ministero di Agricoltura, Industria e Commercio. Rome.

Jan. 1, Apr. 1, May 1, 1915.....	Review, Aug., 1915, p. 74.
June 1, July 1, 1915.....	Sept., 1915, p. 82.
Apr., 1915, and Aug. 1, Sept. 16, 1915.....	Nov., 1915, p. 102.
Oct. 1, 1915.....	Dec., 1915, p. 97.
Nov. 1, 1915.....	Jan., 1916, p. 86.
Aug., 1915, Dec. 1, 1915.....	Feb., 1916, pp. 116, 117.
Jan. 1, 1916.....	March, 1916, p. 105.
Feb. 1, 1916.....	April, 1916, p. 110.
March 1, 1916.....	May, 1916, pp. 101, 102.
Nov., Dec., 1915.....	June, 1916, p. 131.
Apr. 1 and Apr. 16, 1916.....	July, 1916, p. 131.
Jan., Feb., 1916, May 1, 1916...	July, 1916, p. 166.
June 1, 1916.....	Aug., 1916, pp. 106, 107.
June 16, July 15, 1916.....	Sept., 1916, p. 110.
Sept. 16, 1916.....	Dec., 1916, p. 138.
Oct. 1 and 16, 1916.....	Jan., 1917, p. 169.
Nov. 1 and 16, and Dec. 1, 1916.	Feb., 1917, p. 307.

New South Wales. Industrial Gazette issued by the Department of Labor and Industry. Sydney.

July, 1915.....	Review, Nov., 1915, p. 103.
Aug., 1915.....	Dec., 1915, p. 98.
May, 1916.....	Sept., 1916, p. 111.
June, 1916.....	Oct., 1916, p. 107.
July, 1916.....	Nov., 1916, p. 149.

New South Wales. Monthly Statistical Bulletin. Sydney, 1917.  
March, 1917..... Review, July, 1917, pp. 186, 187.

New Zealand. Journal of the Department of Labor. Wellington.

Jan., Feb., Mar., Apr., 1915....	Review, Aug., 1915, pp. 75, 76.
May, June, 1915.....	Sept., 1915, p. 83.
July, 1915.....	Oct., 1915, p. 107.
Aug., 1915.....	Nov., 1915, p. 103.
Sept., 1915.....	Dec., 1915, p. 99.
Oct., 1915.....	Jan., 1916, p. 87.
Nov., 1915.....	Feb., 1916, p. 117.
Jan., 1916.....	April, 1916, p. 110.
Feb., Mar., 1916.....	June, 1916, p. 132.
May, 1916.....	Aug., 1916, p. 107.
June, 1916.....	Sept., 1916, p. 111.
Aug., 1916.....	Nov., 1916, p. 149.
April, 1917.....	July, 1917, p. 187.

## Periodicals—Continued.

Norway. Sociale Meddelelser utgit av Socialavdelingen under Departementet for Sociale Saker, Handel, Industri og Fisheri, Christiania.

No. 2, 3, 1915.....	Review, Sept., 1915, p. 83.
No. 6, 1915.....	April, 1916, p. 110.
No. 1, 1916.....	June, 1916, p. 132.
No. 3, 1916.....	Oct., 1916, p. 108.
No. 4, 1916.....	Dec., 1916, p. 139.
No. 6, 1916.....	May, 1917, p. 800.

Queensland. Industrial Gazette. Brisbane.

June 10, 1916.....	Review, Sept., 1916, p. 111.
July 10, 1916.....	Oct., 1916, p. 108.
Aug. 10, 1916.....	Nov., 1916, p. 150.

Spain. Boletin del Instituto de Reformas Sociales, Publicacion Mensual. Madrid.

Feb., Mar., Apr., May, 1915....	Review, Aug., 1915, pp. 76, 77.
June, 1915.....	Sept., 1915, p. 84.
July, 1915.....	Oct., 1915, p. 108.
Aug., 1915.....	Nov., 1915, p. 103.
Nov., 1915.....	Feb., 1916, p. 118.
Dec., 1915.....	Mar., 1916, p. 106.
Jan., 1916.....	April, 1916, p. 110.
May, 1916.....	Aug., 1916, p. 107.
June, 1916.....	Sept., 1916, p. 111.
July, 1916.....	Oct., 1916, p. 108.
Feb., March, 1917.....	June, 1917, p. 1034.

Sweden. Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm.

Nov. 12, 1915.....	Review, Mar., 1916, pp. 106, 107.
No. 1, 1916.....	May, 1916, p. 103.
No. 2, 1916.....	June, 1916, p. 133.
No. 5, 1916.....	Aug., 1916, p. 107.
No. 6, 1916.....	Sept., 1916, p. 111.
No. 7, 1916.....	Oct., 1916, 109.
No. 8, 1916.....	Dec., 1916, p. 140.
No. 9, 1916.....	Jan., 1917, p. 169.
No. 10, 1916.....	Feb., 1917, p. 309.
No. 2, 1917.....	June, 1917, p. 1035.
No. 3, 1917.....	July, 1917, p. 192.

Sweden. Socialstyrelsen, Sociala Meddelanden. Stockholm.

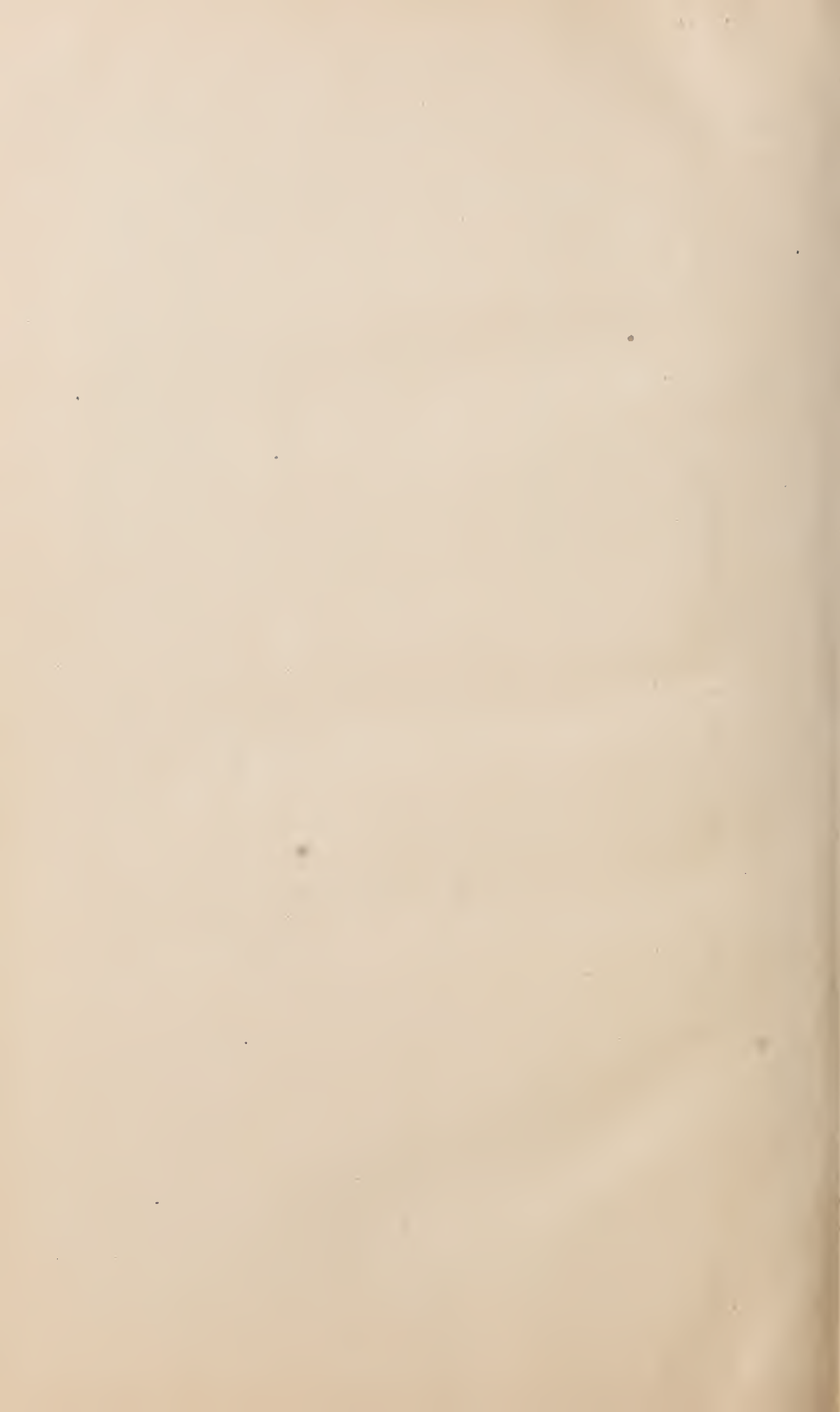
No. 1, 2, 3, 4, 1915.....	Review, Aug., 1915, pp. 77, 78.
No. 5, 6, 1915.....	Sept., 1915, p. 84.
No. 8, 1915.....	Nov., 1915, pp. 103, 104.
No. 10, 1915.....	Jan., 1916, p. 88.
No. 9, 1915.....	Dec., 1915, p. 99.
No. 11, 1915.....	Feb., 1916, p. 118.

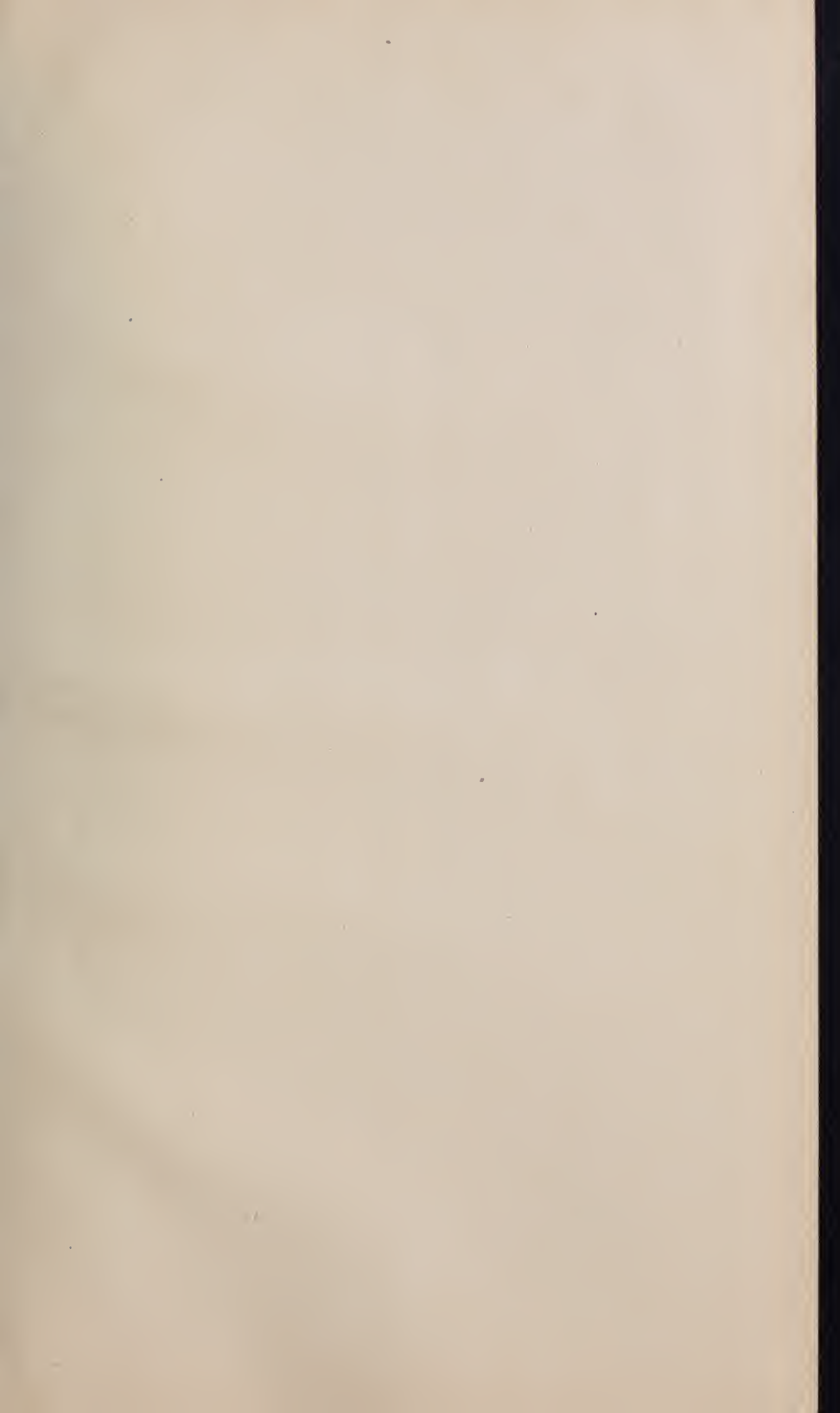


The Netherlands. Centraal Bureau voor de Statistiek, Maandschrift.  
The Hague.

Jan., Mar., Apr., 1915.....	Review, Aug., 1915, p. 78.
May, June, 1915.....	Sept., 1915, pp. 82, 83.
July, Sept., 1915.....	Dec., 1915, p. 98.
Oct., 1915.....	Jan., 1916, pp. 86, 87.
Nov., 1915.....	Feb., 1916, p. 117.
Dec., 1915.....	March, 1916, p. 106.
Jan., 1916.....	May, 1916, p. 102.
Feb., 1916.....	June, 1916, p. 131.
March, April, 1916.....	July, 1916, pp. 166, 167.
June, 1916.....	Sept., 1916, p. 110.
July 1, 1916.....	Oct., 1916, p. 106.
Aug., 1916.....	Nov., 1916, p. 149.
Sept., 1916.....	Dec., 1916, p. 139.
Nov., 1916.....	Feb., 1917, p. 308.
Dec., 1916.....	April, 1917, p. 640.
Feb., 1917.....	June, 1917, p. 1033.
Mar. 31, 1917, Apr. 30, 1917....	July, 1917, p. 185.

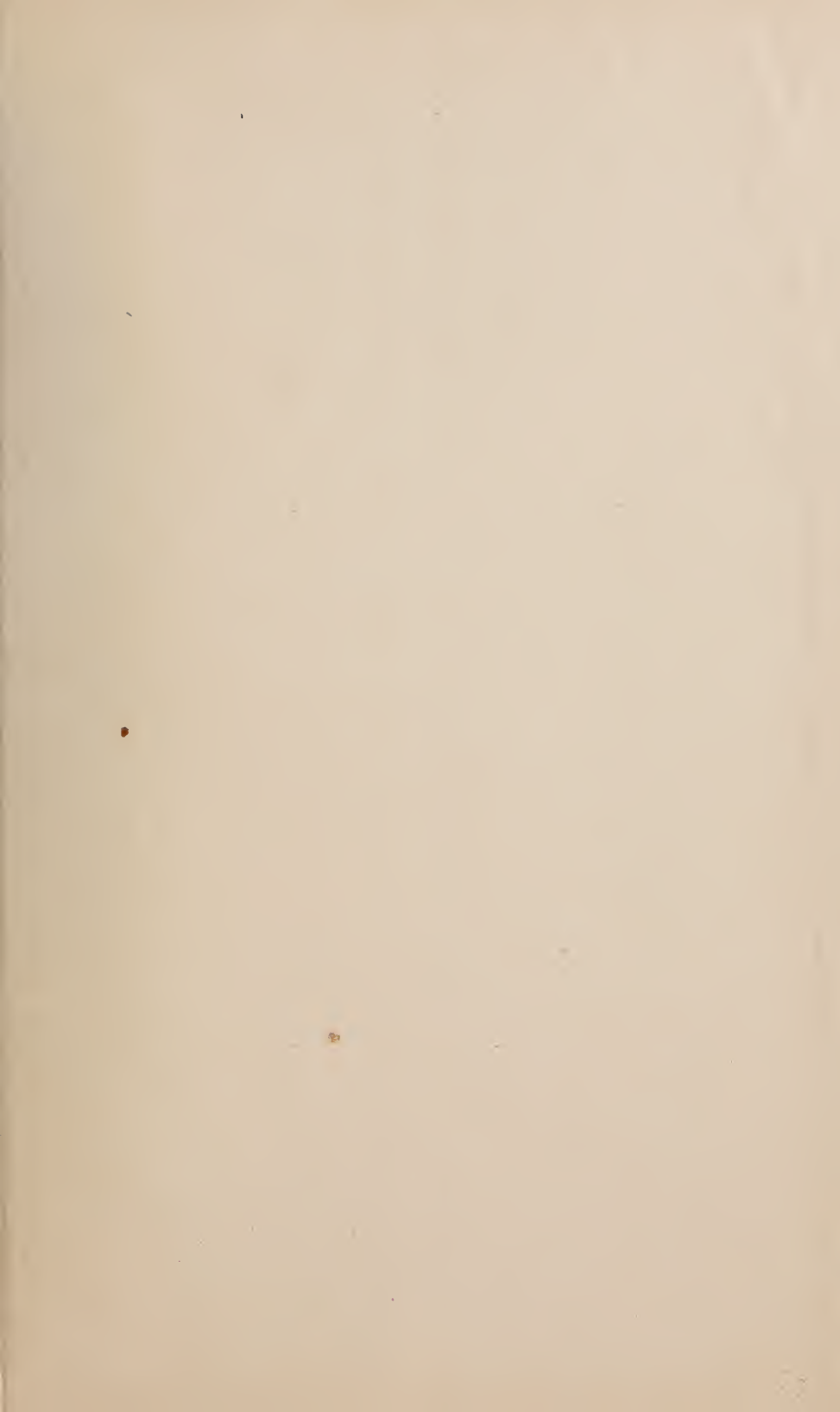












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